

Self-confidence at work: understanding and developing the construct

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Abstract

This thesis comprises two papers presenting findings that contribute to the understanding of self-confidence at work and the development of the construct. *Self-confidence through the lens of authenticity: A systematic review* presents findings from a conceptual and methodological review of measures of self-confidence and considers their use in workplace settings. It concludes that current measures have a number of methodological limitations and conceptually do not comprehensively measure the construct of self-confidence. Self-esteem and self-efficacy appear as thematically distinct constructs in the review, yet are used interchangeably with self-confidence in the literature. Self-esteem and self-efficacy feature in the review as being important components of self-confidence yet it was concluded to be a wider construct than either alone. Further qualitative work was identified as being required to understand this.

In *Self-confidence at work; the development of a dynamic conceptual model*, it is acknowledged that current approaches to understanding self-confidence in the workplace are static and focus on personal attributes, cognitive and motivational aspects over physiological experiences whilst paying insufficient attention to diversity. A model was developed using an embodied methodology that sought to address limitations in current approaches. The model captures the dynamics of loss of confidence and building a confidence performance and identifies the role mindset plays. Through incorporating experiences of self-confidence from a diverse population and giving due consideration to embodiment in our methodology, this study suggests that self-confidence is a broad, dynamic and social construct.

Self-confidence through the lens of authenticity: A systematic review

Abstract

This systematic review presents findings from a conceptual and methodological review of self-confidence measures. The review was conducted through the lens of authenticity. Three databases (EBSCOhost business source premier, Proquest ABI/INFORM Collection & ASSIA and PsycINFO) were searched to retrieve empirical studies published up until 2017, with no lower time limit. All articles had to meet specific inclusion criteria, which resulted in 15 self-confidence measures selected for full review. The items of all measures were thematically analysed. Measures were methodologically reviewed using Skinner's (1981) validity evidence framework. The findings were reviewed through the lens of authenticity. It was concluded that the concept of self-confidence requires qualitative exploration, with a focus on authenticity to minimize maladaptive behaviour and support coaches, trainers and HR professionals who are helping individuals develop self-confidence.

Introduction

"It undoubtedly takes a certain level of confidence to be a leader; otherwise, no one would follow you." (Elrod 2013, p17). Ehrlich (2015) proposes that leaders perform well when they feel good about themselves. He puts this down to growing from the inside out such as cultivating self-acceptance rather than growing from the outside in, such as building self-esteem. He poses that self-acceptance helps leaders build true self-confidence.

Self-esteem

Hewitt (2005) describes the general, yet imprecise definition of self-esteem as being the evaluative dimension of self-concept. The self-evaluations range from self-affirming to self-denigrating. He went on to describe four ideas that self-

esteem is rooted in: acceptance, evaluation, comparison and efficacy. The idea of comparison gives rise to the social lens of self-esteem. However, Kernis (2003) argues that most contemporary theorists conceptualise high self-esteem as global feelings of self-liking, self-worth, respect and acceptance, which appears to be less dependent on perceptions of others. There are also sub types of self-esteem, which include domain specifics such as organisational based self-esteem (Pierce et al, 1989); contingent self-esteem and true self-esteem (Deci & Ryan, 1995).

As with many latent concepts, there is a lack of consensus among authors and researchers on exactly how to define self-esteem. Despite this, most people feel self-esteem is important (Baumeister et al 2003). Research demonstrates self-esteem has a strong relationship to happiness and optimism (Lyubomirsky, Tkach, & Dimatteo 2006). As well as linking self-esteem with mental health and wellbeing, researchers are also interested in understanding what interventions or models can be linked with improved self-esteem; using self-esteem as a form of validation. Examples of this include mindfulness and self-esteem (Randal, Pratt and Bucci, 2015, Park and Dhandra, 2017), coaching and self-esteem (Rank & Gray, 2017), transformational leadership and self-esteem (Matzler, Bauer and Mooradian, 2014).

Inconsistent findings

However, the research on self-esteem is not consistent. Baumeister et al (2003) searched the literature and found that occupational success may boost self-esteem rather than the reverse. They also concluded that laboratory studies have generally failed to find that self-esteem causes good task performance, with the important exception that high self-esteem facilitates persistence after failure. Leadership does not stem directly from self-esteem, but self-esteem may have indirect effects. Other findings that bear relevance to the work place include those with high self-esteem are more willing to speak up in groups and to criticize the group's approach.

Self-esteem and maladaptive behaviour

Compared with people with low self-esteem, individuals with high self-esteem show stronger in-group favouritism, which may increase prejudice and discrimination. (Baumeister et al, 2003)

Crocker and Park (2004) argue that the short-term pursuit of self-esteem can have long-term consequences. Their view is that when individuals have self-validation goals they react in ways that undermine learning; relatedness; autonomy; self-regulation and overtime mental and physical health.

It seems evident from much of the literature that self-esteem is contingent on being accepted by others (Deci & Ryan, 1995; Tafarodi & Swann, 1995; Kernis, 2003; Neff & Vonk, 2008; Wood et al, 2008; Erlich, 2015) and that this can in turn be influenced by one's social role (Eagly & Wood, 1999; Anthony, Wood & Holmes, 2007; Wood et al, 2008). To counter the ego driven self-esteem that can lead to undesirable behaviours, alternatives have been proposed. "True self-esteem" is not dependent on particular outcomes or social approval (Deci & Ryan, 1995). Kernis (2003) presents a theoretical perspective on the nature of "optimal self-esteem". As well as wishing to show that optimal and high self-esteem are different, he proposes optimal self-esteem is genuine, true, stable and congruent. He links optimal self-esteem with authenticity as a means of advancing our understanding of optimal self-esteem.

Neff a leading expert in self-compassion, promotes it as a healthy attitude towards oneself, an alternative to self-esteem (Neff & Vonk 2009). They cite a growing body of research associating self-compassion with greater life-satisfaction, social connectedness, mastery goals, as well as less self-criticism, depression, anxiety, rumination, thought suppression, perfectionism, performance goals and more.

Self-efficacy

According to Bandura (2001) self-efficacy is believing in one's own ability to produce desired results – which motivates actions and perseverance. However, this implies a cognitive phenomenon focused on task, it does not account for the phenomenon that low self-efficacy can occur even when an individual is capable of producing the desired results.

Self-efficacy and maladaptive behaviour

There is some evidence to suggest there is a link between self-efficacy and perfectionism. Hart et al (1997) found that high levels of Self-Oriented Perfectionism and Other-Oriented Perfectionism were associated with low self-efficacy. Where unrealistic standards have been set for oneself (Self-Oriented Perfectionism) or others (Other-Oriented Perfectionism) then self-efficacy is adversely impacted. It is possible however, that the assumed direction in this research is wrong, rather that self-efficacy is the cause of perfectionism. If an individual were to take more of a growth mindset to achieving tasks, then they would be less focused on the need to produce desired results.

Dweck (2017) defines a fixed mindset as “believing that your qualities are carved in stone – the fixed mindset creates an urgency to prove yourself over and over” (no page number - kindle version) Growth mindset on the other hand is “based on the belief that your basic qualities are things you can cultivate through your efforts....everyone can change and grow through application and experience”. If self-efficacy is viewed through the lens of a growth mindset, then the horizon expands. An individual will still have a view on whether they are suitably skilled to achieve the desired results, but with a growth mindset they will also have the view that if they don't achieve the desired results then they get to learn something along the way, achieving mastery goals. Negative effects such as perfectionism and procrastination are then loosened.

Procrastination is when an individual “voluntarily delays an intended course of action despite expecting to be worse off for the delay” (Steel, 2007 p.7) Self-efficacy has been studied in several previous procrastination studies, with results showing an inverse relationship with procrastination (Tuckman, 1991; Ferrari, Parker, & Ware, 1992; Haycock et al., 1998; Wolters, 2003; Steel, 2007). Whilst most of the research focuses on students, it seems reasonable to assume a similar relationship exists for those who procrastinate in the workplace. As with perfectionism, if an individual saw the completion of work as an opportunity to learn and grow, then they may embrace the opportunity rather than delay. Neff (2011) links procrastination with fear of failure and suggests that if we are able to lose our fear of failure, we become free to challenge ourselves much more than if restricted by it.

Beyond individuals' behaviour, an over emphasis on self-efficacy can lead to workplace practices that oppose diversity in the workplace. Lunenburg (2011) suggested measuring self-efficacy during selection, and only sending individuals with high self-efficacy on training and development programmes.

The case for a broader construct

Both self-efficacy and self-esteem have limitations as there is the risk that the pursuit of either can lead to maladaptive behaviour. Self-efficacy is linked with maladaptive perfectionism and procrastination, and self-esteem tends to be contingent on the acceptance of others which in turn leads to maladaptive behaviours to ensure their acceptance is sustained.

To overcome this, the introduction of authenticity can counter such undesirable effects, seeking for the phenomenon to come from within rather than externally.

Authenticity

"Authenticity is at the heart of being human as being human means to be experiencing, understanding, judging and deciding/acting" Coghlan (2008, p.360)

Goldman and Kernis (2002, no page number) define authenticity as "the unobstructed operation of one's true or core self in one's daily enterprise". They present four components: awareness, unbiased processing, behaviour and relational orientation. Awareness is about having awareness of, and trust in one's motives, feelings, desires and self-relevant cognitions. Beyond awareness, there also needs to be acceptance of potential contradictory parts of one's personality, rather than just a rigid acceptance of the aspects of one's personality that are consistent with one's overall self-image. Unbiased processing involves "not denying, distorting, exaggerating, or ignoring private knowledge, internal experiences and externally generated information" (Kernis 2003, P.14). The third aspect, behaviour is about "acting in accord with one's values, preferences and needs". In particular this is opposed to acting in such a way that will merely keep others happy, gain praise or avoid punishment. Finally, relational authenticity is an active process of self-disclosure and development of mutual intimacy and trust. This is so that those involved intimately will see each

other's true aspects of self – the desirable and undesirable. Goldman and Kernis (2002) developed their theory through reviewing research, and designed a measure to assess the components. However, they engaged just 79 students in their research and whilst overall the internal consistency was .83, two of the subscales were below .70.

Goldman & Kernis' (2002) work can be viewed as preliminary due to the insufficient psychometric support for their construct. Wood et al, (2008) also looked at dispositional authenticity. Other researchers looked at facets of authenticity which include internalizing external influence, alienation, and authenticity in relationships. Wood et al (2008) take a person-centred conception of authenticity, and cite Barrett-Lennard's definition (1998, p.82) which is a tripartite construct involving "consistency between the three levels of (a) a person's primary experience (b) their symbolized awareness, and (c) their outward behaviour and communication". This is represented in the figure 1.

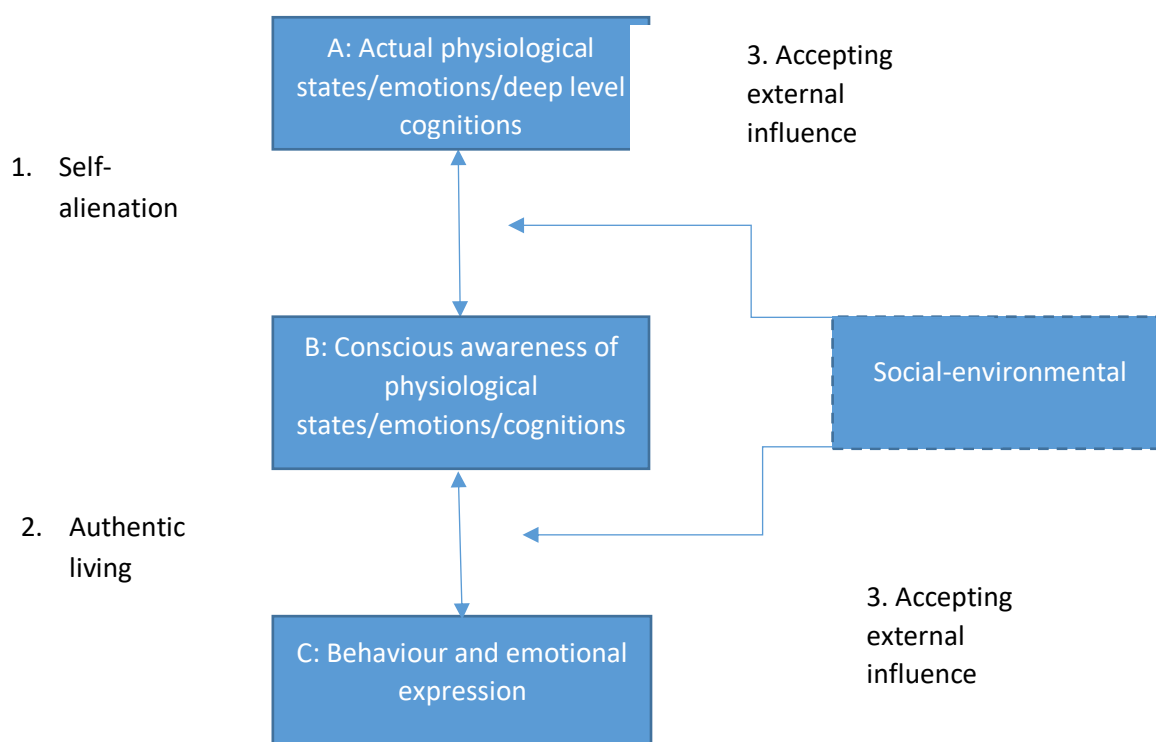


Figure 1. *The person-centred conception of authenticity.* Source: Wood et al 2008a p.386

We can see from figure one that authentic living involves behaving and expressing emotions in such a way that is consistent with the conscious awareness of physiological states, emotions, beliefs, and cognitions (Line 2). In other words, authentic living involves being true to oneself in most situations and living in accordance with one's values and beliefs. Wood et al 2008.

Wood et al (2008) developed a measure of dispositional authenticity based on the tripartite conception of authenticity. The psychometric properties were robust, and confirmed the factor structure, reliability and validity of the tool. There was factor invariance across each of the samples, between both genders and broad ethnic grouping showing the scale behaves consistently across diverse demographic groups.

Whilst the Authenticity Scale correlated significantly with self-esteem, the correlations with authentic living and accepting external influence were typically lower than .30 (Sample 2: .24 and -.23 Sample 3: .23 and -.27 and Sample 4: .36 and -.20 respectively). Following the guidance in Pangallo et al (2008) $>.30$ is the optimal correlation for convergent evidence of a psychometric measure.

The case for self-confidence

Self-esteem and self-efficacy don't stack up and need authenticity integrated to minimise maladaptive behaviour. Authenticity requires conscious awareness of physiological states, emotions and cognitions. Self-esteem and self-efficacy focus primarily on cognitions. Furthermore, self-efficacy and self-esteem do not appear to be theoretically broad enough to cater for individuals who identify with feminine self-esteem or self-efficacy.

Part 1: Systematic Review of Self-Confidence Measures

The purpose of Part 1 was to undertake a systematic review of self-confidence measures developed for use in adults. The content of the identified measurement scales was then reviewed to understand how self-confidence has been, and is being operationalised.

Method

Procedure. A literature search was conducted using the following databases: EBSCOhost business source premier, Proquest ABI/INFORM Collection & ASSIA and PsycINFO. Search parameters included the following: (self-confidence OR self-efficacy OR self-esteem) and (measure OR scale OR assessment OR questionnaire). Results were restricted to English AND human AND adult AND peer reviewed publications and were subject to specific exclusion and inclusion criteria (see Figure 2) below.

Inclusion Criteria	Exclusion Criteria
<ol style="list-style-type: none">1. Study population: adults (18+)2. Study settings: not specified3. Time period: unrestricted4. Publication: English language, peer reviewed5. Admissible criteria: original study of scale development, scale revisions, validation studies6. Conceptually related cases	<ol style="list-style-type: none">1. Study did not contain original data2. Study did not describe or validate a measure of adult confidence3. Qualitative studies4. Measures relative to health5. Measures relative to sport6. Measures relative to consumer7. Measures relative to family8. Measures relative to religion9. Measures relative to specific occupations

Figure 2. *Inclusion and exclusion criteria for literature search*

The study population parameters and time of study were unrestricted to maximise the scope of the results. However, we did exclude measures that were designed for particular occupations and measures relative to specifically non-work contexts were also excluded to increase the generalizability of our findings. Scale refinements were also included since scale development is an iterative process and can result in the development of revised scales (McHorney, 1996).

Data Extraction. The initial literature search yielded 7513 articles. 3762 duplicate articles were removed. Two researchers (AK & JY) sifted titles and excluded 3661 articles as they failed the inclusion criteria or did not meet the exclusion criteria. The same two researchers sifted abstracts and excluded 64 articles. 38 papers did not describe or validate a measure, six papers contained a research population below 18 years. Sixteen measures were not sufficiently relative. Two were not peer reviewed, one was impoverished and one scale was not written in English. One researcher (AK) read the full papers and excluded 14 articles leaving 15 to be included in the review. Three studies did not contain original data. Three papers contained scales that weren't written in English. Two papers were not sufficiently relative concepts. One paper did not describe or validate a measure. One paper contained a measure that was relevant to a specific occupation. One paper contained a measure relative to religion. One paper declared the measure not to be valid. One paper did not contain sufficient data for assessment purposes.

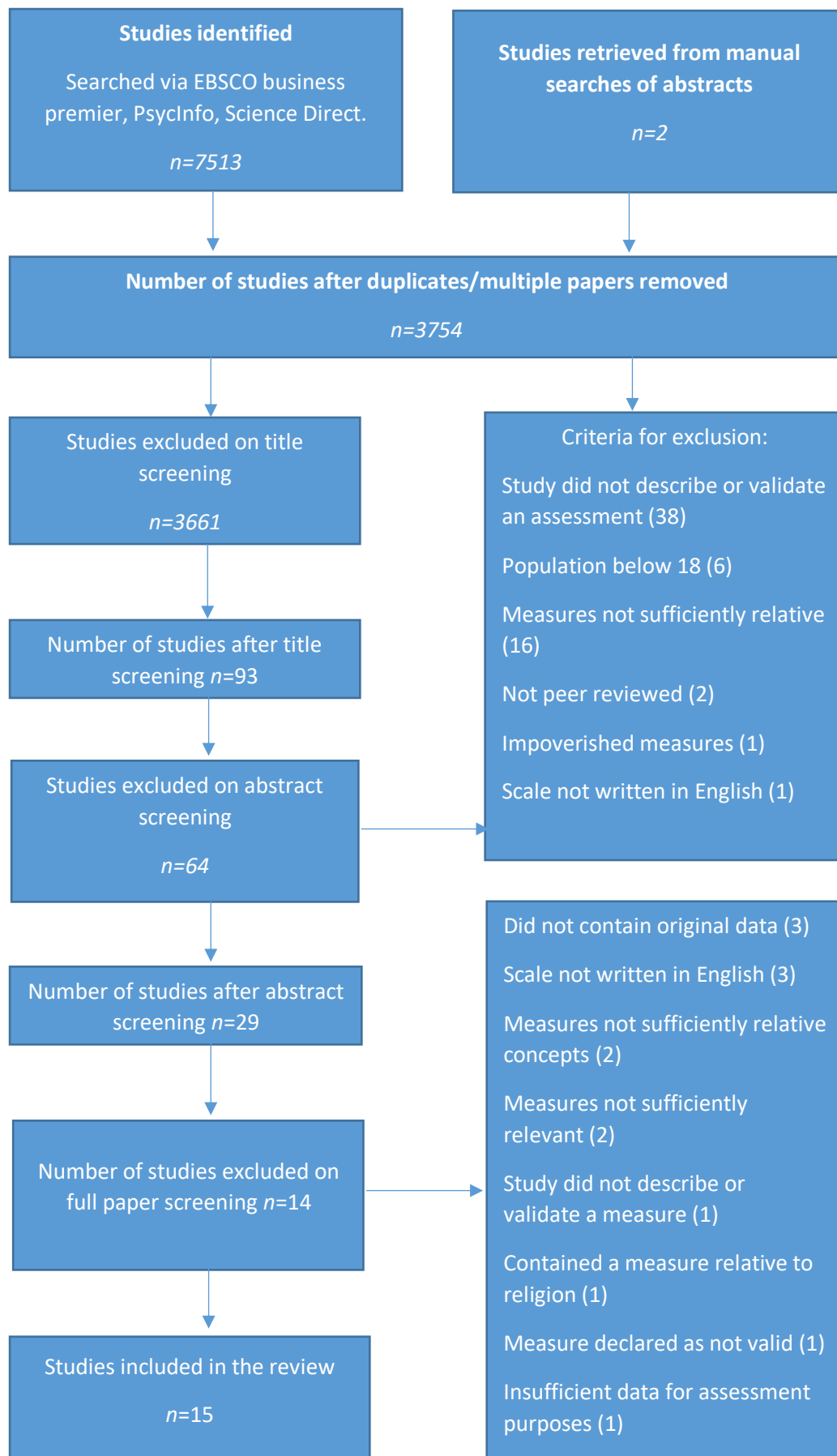


Figure 2. The sift process

Table 1 A summary of each measure's concept and the thematic review

Assigned number	Name of Measure	Conceptual review			Thematic Review				
		Self-efficacy	Self-esteem	Unconditional self-regard	Social/communication	Competence	Appearance	Seeking and offering help	Relationship with self
1	Perceived Social Self-Efficacy Scale (PSSE)	X			X			X	
3	Strengths Self-Efficacy Scale (SSES)	X				X			
4	Self-Efficacy Scale (SES)	X			X	X			
6	Cognitive-Behavioural Social Self-Efficacy Scale (CBSSES)	X			X				
8	Occupational Self-Efficacy Scale (OCCSEFF)	X				X			
9	New General Self-Efficacy Scale (NGSE)	X			X				
10	Leadership Self Efficacy (LSE)	X			X	X		X	
13	Workplace Social Self-Efficacy (WSSE)	X			X			X	
7	Short version of the Occupational Self-Efficacy Scale (S-OCCSEFF)	X				X			
5	Self-Liking and Self-Competence (SLCS)		X			X			X
11	The Self Esteem Worksheet (SEW)		X		?	?	?	?	?
12	Organization-Based Self-Esteem Scale (OBSE)		X			X			
15	Full-Name Name-Liking (FNNL)		X						X
14	State Self Esteem Scale (SSES)		X			X	X		X
2	Unconditional Self-Regard Scale (USRS)			X					X

Results

Five themes emerged from the data; *social/communication*, *competence*, *appearance*, *seeking and offering help* and *relationship with self*. Two scales measured three themes (LSE, State SSE), four scales measured two themes (PSSE, SES, SLSC, WSSE) eight scales measured one theme (OBSE, UCSR, Strengths SSE, CBSSES, S-OCCSEFF, OCCSEFF, NGSE, FNNL), and one scale (SEW) did not measure any the themes, although it has the potential (indicated as '?') to measure all of them as scale users identify and evaluate areas relevant to their self-esteem.

Six scales measured *social/communication* (PSSE, SES, CBSE, NGSE, LSE, WSSE), three of these were scales designed to measure the facet social self-efficacy. Eight scales measured *competence* (SES, LSE, Strengths SE, SLSC, S-OCCSEFF, OCCSEFF, OBSE, State SE). One scale measured *appearance* (State SE). Three scales measured *seeking and offering help* (PSSE, LSE, WSSE). Five scales measured *relationship with self* (LSE, SLSC, State SE, USRS, FNNL).

It is notable that not one scale measures four or all traits. Some scales are intentionally designed to measure one facet of self-efficacy such as the social measures (PSSE, CBSSES, WSSE). Interestingly, the scale that contained no items had the potential to measure all of the themes but this is dependent on what the individual completing the measure feels is relevant.

Social/communication is only measured by self-efficacy scales, as is *seeking or offering help*. *Relationship with self* is only measured by self-esteem scales, as is *appearance*. *Competence* is measured by both self-efficacy and self-esteem scales.

Table 2 Summary Information of Self-Confidence Scales

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
1	Scale of Perceived Social Self-Efficacy (PSSE; Smith & Betz 2000)	Bandura's self-efficacy theory (1977, 1997), helps to explain individual's career decisions/performance, and inform interventions. <i>Designed for use in career development.</i>	Undergraduate students ($n = 354$); male ($n = 90$), female ($n = 264$). Test retest sample ($n = 107$); males ($n = 29$) females ($n = 78$)	25 items* Total scale ($\alpha = .94$) <i>Test retest</i> overall ($r = .82$); males ($r = .86$), females ($r = .80$)	<i>Evidence based on test content:</i> Written or adapted from Adolescent Social Self-Efficacy Scale (Connolly, 1989) <i>Validity argument:</i> Correlated with Social SE scale of SES M & F ($r = .60$ & $.62$), Social confidence scale of SCI M & F ($r = .46$ & $.53$), Holland themes Enterprising: M & F ($r = .68$ & $.65$), Artistic M & F ($r = .45$ & $.31$) Negative correlation with Interaction Anxiousness Scale M & F ($r = -.57$ & $-.68$)
2	Unconditional Self Regard Scale (USRS; Betz, Wohlgemuth, Serling, Harshbarger & Klien, 1995)	Roger's (1957, 1961) discussion of healthy personality and self-acceptance/unconditional self-regard. <i>Designed for use in counselling interventions.</i>	Study 1: students ($n = 152$); male ($n = 78$), female ($n = 74$). Study 2: students ($n = 107$); male ($n = 56$), female ($n = 51$) Study 3: students ($n = 95$) Study 4: students ($n = 164$); female ($n = 83$), male ($n = 81$)	19 items Total scale samples 1 and 2 ($\alpha = .87$ and $.90$)	<i>Evidence based on test content:</i> Experts wrote questions based on the writings of Rogers. <i>Validity argument:</i> Correlation with Rosenberg, Samples 1 & 2, ($r = .77$ & $.78$) Coopersmith, Sample 1 ($r = .64$), General Mental Health Questionnaire, Samples 1 & 2 = $.67$ & $.69$, negative correlation with State-Trait Anxiety Inventory, Samples 1 & 2, ($r = -.70$ & $-.75$), Beck Depression Inventory, sample 2 ($r = -.65$, social anxiety ($r = -.36$))
3	Strengths Self-Efficacy Scale (SSES; Tsai, Chaichanasakul, Zhao, Flores & Lopez 2013)	Strengths assessment being consistent with counselling psychology's philosophy that focusing on an individual's strengths can lead to an improvement in vocational and	Study 1: ($n = 275$) females ($n = 212$), males ($n = 63$). Various occupations Study 2: ($n = 302$); females ($n = 213$), males ($n = 87$), other ($n = 2$) Various occupations	11 items* Total scale ($\alpha = .95$) <i>Test retest</i> ($r = .88$)	<i>Evidence based on test content:</i> Items were generated by experts, based on self-efficacy theory and literature related to the development of strengths <i>Validity argument:</i>

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
		psychological health and well-being. <i>Designed for career counsellors, educators and researchers.</i>	Test-retest ($n = 36$)		Correlated with Rosenberg Self Esteem Scale ($r = .57$) and Satisfaction with Life Scale ($r = .49$) Marlowe-Crowne Social Desirability Scale - Short Form ($r = .15$)
4	Self Efficacy Scale (SES; Sherer & Maddux, 1982)	Bandura, 1977, two types of expectancies exert powerful influences on behaviour: outcome expectancies - certain behaviour will lead to certain outcomes and self-efficacy expectancy - belief one can successfully perform the behaviour. <i>Designed for use in a therapy setting.</i>	Study 1: students ($n = 376$) Study 2: inpatients having alcoholism treatment ($n = 150$)	23 items General SE ($\alpha = .86$) Social self-efficacy ($\alpha = .71$)	Evidence based on test content: Items written to measure general self-efficacy expectancies in areas such as social skills or vocational competence. Validity argument: General & Social Correlation with Marlowe-Crowne Social Desirability Scale, ($r = .431$ & $.278$), Ego Strength Scale, ($r = .290$ & $.061$), Interpersonal Competency Scale ($r = .451$ & $.432$), Self Esteem Scale ($r = -.510$ & $-.279$) Negative correlation with Internal-External Control Scale ($r = -.28$ & $-.173$), Personal Control subscale of Internal-External Control Scale ($r = -.355$ & $-.132$)
5	Self-Liking Self Competence Scale (SLCS; Tatarodi & Swann, 1995)	Self-esteem consists of two distinct dimensions: self-liking in-line with internalised social values, and self-competence where intentions and outcomes correspond. <i>Intended setting for use not stated.</i>	Study 1: students ($n = 1053$); women ($n = 541$) men ($n = 495$), unspecified ($n = 17$) Study 2: students ($n = 835$); women ($n = 387$), men ($n = 342$), unspecified ($n = 106$) Study 3: students ($n = 844$); women ($n = 391$), men ($n = 453$)	20 items Self-liking ($\alpha = .92$), Self-competence ($\alpha = .89$) Test retest random subset ($n=128$) Self-liking ($r = .80$) self-competence scales ($r = .78$)	Evidence based on test content: Items were generated, evaluated by graduate students, piloted with students. Validity argument: Self-competence correlation with Self-Attributes Questionnaire, M & F ($r = .30$ & $.48$), negative correlation with Beck Depression Inventory Men - SL & SC ($r = -.30$ & $-.20$) Women - SL & SC ($r = -.34$ & $-.14$)
6	Cognitive-Behavioural Social Self-Efficacy Scale	Whilst the perception of one's ability to perform a task is	($n = 301$); male ($n = 43$), female ($n = 258$)	18 items* Total scale ($\alpha = .94$)	Evidence based on test content:

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
	(CBSES; Grieve, Witteveen, Tolan & Jacobson, 2014)	distinct from one's actual ability, efficacy beliefs can have a pervasive effect on performance and adaptive psychosocial functioning. <i>Designed for researchers and clinicians.</i>	Sub sample ($n = 39$) for construct and criterion validity Sub sample ($n = 13$) test-retest	Test-retest two week interval ($r = .75$)	Tromso Social Intelligence Scale was amended to reflect a measure of social self-efficacy. Based on Bandura's recommendations, instructions, scale items and scale anchors were adapted by 1st and 2nd authors, then reviewed by an independent panel of experienced researchers. Validity argument: correlation CBSES with General Self Efficacy (GSE) ($r = .43$). Negative correlation with Social anxiety ($r = .30$), depression ($r = -.18$), general anxiety ($r = -.14$) ns correlation with stress ($r = -.08$)
7	Short version of the Occupational Self-Efficacy Scale (Rigotti, Schyns & Mohr, 2008)	Bandura's concept of self-efficacy. <i>Designed for use in the workplace.</i>	Health care, Retail, and Temporary Agency Workers ($n = 1,535$); Germany ($n = 200$), Sweden ($n = 147$), Belgium ($n = 616$), Great Britain ($n = 195$), Spain ($n = 377$)	6 items* Germany ($\alpha = .87$) Sweden ($\alpha = .86$) Belgium ($\alpha = .85$) Britain ($\alpha = .90$) Spain ($\alpha = .86$)	Evidence based on test content: Items were selected from parent scale on the basis of their item characteristics such as item-total correlation, factor loading and effect on internal consistency. Further modifications were made to items. Validity argument: Correlation with Performance Germany ($r = .32$) Sweden ($r = .58$) Belgium ($r = .43$) UK ($r = .44$) Spain ($r = .45$) No consistent significant correlations across all five countries for Job Satisfaction, Commitment or Job Insecurity.
8	Occupational Self-Efficacy Scale (OCCSEFF; Schyns & von Collani, 2002)	Bandura's concept of self-efficacy. <i>Designed for use in the workplace.</i>	Study 1: students who had worked or were working, with a broad range of professions from academic, skilled, unskilled ($n = 153$); female ($n = 88$), male ($n = 64$), did not say ($n = 1$)	20 items ($\alpha = .92$)	Evidence based on test content: Items were taken from four different scales that were modified and adapted, being reformulated to address the occupational domain. Validity argument:

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
			Study 2: workers in a hierarchically low position with no subordinates ($n = 326$); male ($n = 196$), female ($n = 124$)		OCCSEFF correlations with General Self Efficacy Scale ($r = .568$), Generalised work-related self-efficacy scale ($r = .674$), Internal locus of control ($r = .388$), Rosenberg's Self Esteem scale ($r = .493$). OCCSEFF correlations with Task Demands ($r = .22$), Leader-Member Exchange ($r = .17$), Job Satisfaction- superior ($r = .16$), JS colleagues ($r = .10$), JS task ($r = .31$). NS correlation with JS job conditions ($r = .02$)
9	New General Self-Efficacy Scale (NGSE; Chen, Gully & Eden, 2001)	A more trait-like SE arising from Bandura's definition of self-efficacy (as opposed to conceptualising and studying self-efficacy as a task-specific or state-like construct (SSE) also arising from Bandura's definition). <i>Designed for use in the workplace.</i>	Study 1: students ($n = 316$) 78% female Study 2: students ($n = 323$), 77% women. 43% employed part time, 30% employed full time	8 items ($\alpha = .86$ and $.90$) <i>Test retest</i> ($r = .67$)	<i>Evidence based on test content:</i> Retention of the seven NGSE items Chen & Gully found to be distinct from the SGSE scale and S-esteem. And created seven additional NGSE items, intending to eliminate redundancies later. Independent construction followed by third author review. Two independent panels (IO Psych grads and psych undergrads) examined the content validity of the scales using definitions of GSE and self-esteem. 6 items eliminated based on face validity, inter-item correlations and factor loadings. <i>Validity argument:</i> Correlation NGSE with SGSE ($r = .78$), with Rosenberg Self Efficacy ($r = .75$) factor analysis used to determine discrimination between self-efficacy and self-esteem. Correlation with NGSE and 10 occupational self-efficacy subscales ($r = .35, .33, .28, .34, .28, .32, .23,$

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
					.27, .26, .33, .30) ns correlation with exam performance ($r = .07$)
10	Leadership Self Efficacy (LSE; Anderson, Krajewski, Goffin & Jackson, 2008)	Application of Bandura and Gist & Mitchell theory: People with strong self-efficacy beliefs are likely to be more motivated to pursue action, contribute more effort, and persevere in the face of obstacles to leadership. <i>Designed for use in the workplace.</i>	Phase 1: middle to exec level managers of a large financial institution ($n = 44$); executives ($n = 11$) male ($n = 10$), female ($n = 1$), managers of SMEs ($n = 33$), male ($n = 27$), female ($n = 6$) Phase 2: managers ($n = 227$); women ($n = 158$), men ($n = 69$) representing a diversity of business units in an international services company	88 items LSE ($\alpha = .70$) 2 subscales ($\alpha = <.70$), 16 ($\alpha = >.70$) Leadership Effectiveness all 9 subscales ($\alpha = >.70$)	<i>Evidence based on test content:</i> Items identified via interview with leaders and literature review. <i>Validity argument:</i> Multi source ratings of leadership effectiveness ($r = .59$)
11	The Self Esteem Worksheet (Overholser 1993)	An idiographic method of assessing self-esteem whilst retaining a quantitative basis. <i>Designed for use in clinical and research settings.</i>	College students ($n = 323$); males ($n = 148$), females ($n = 175$)	0 items** α cannot be calculated for nil items <i>Test retest</i> 10 week interval whole sample ($r = .61$) males ($r = .73$), females ($r = .54$)	<i>Evidence based on test content:</i> A one-page flow chart to be filled out in worksheet format, collaboratively between tester and participant <i>Validity argument:</i> Correlations with Rosenberg Self-Esteem ($r = .36$), Watkins Self-Esteem ($r = .34$), Luck & Heiss Self-Esteem Scale ($r = .30$) Negative correlations with Beck Depression Inventory ($r = -.25$), UCLA-Loneliness Scale ($r = -.33$), DEQ dependency ($r = -.13$) DEQ self-criticism ($r = -.29$)
12	Organization-Based Self-Esteem Scale (OBSE; Pierce, Gardner,	Korman's self-consistency motivational theory. The way individuals react to life experiences varies as a function	Summer School Teachers, Mining Firm Employees, Managers, School Employees, Automotive Service Club	10 items Across all 7 studies ($\alpha = >.86$) <i>Test retest</i> ($r = .75$)	<i>Evidence based on test content:</i> Derived from comments heard often in discussions with employees, managers and organisational scientists.

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
	Cummings & Dunham, 1989)	of their self-esteem. Individuals will develop attitudes and motivations and will behave in ways that will maintain their levels of self-esteem, such as job satisfaction, and high productivity levels to maintain high self-esteem. <i>Designed for use in the workplace.</i>	Employees, State Employees Association & Evening MBA Students ($n = 2444$)		<p>Validity argument:</p> <p>Correlations</p> <p>Summer school teachers; OBSE (semantic differential) ($r = .69$), Managerial respect ($r = .52$) General job satisfaction ($r = .45$)</p> <p>Organizational commitment ($r = .53$). Mining Firm employees; Internal work motivation ($r = .47$) Organizational commitment ($r = .59$).</p> <p>Managers; negative correlation ($r = -.46$).</p> <p>School district employees; Managerial respect ($r = .30$) Organizational commitment ($r = .19$)</p> <p>General job satisfaction ($r = .58$) Organizational commitment ($r = .43$). Automobile service-club employees; Rosenberg's Self-Esteem ($r = .54$)</p> <p>Beehr's task self-esteem ($r = .57$) Job complexity ($r = .44$) Intrinsic work motivation ($r = .21$) General job satisfaction ($r = .41$)</p> <p>Organizational commitment ($r = .50$)</p> <p>Performance, non-exempt employees ($r = .15$)</p> <p>ns correlation with performance, telemarketers ($r = .11$). State educational association employees; Rosenberg's Self-Esteem ($r = .54$) Beehr's task self-esteem ($r = .57$) Job complexity ($r = .39$) Intrinsic work motivation ($r = .30$) General job satisfaction ($r = .44$) Organizational commitment ($r = .60$)</p> <p>Performance ($r = .26$). Evening M.B.A students; Chronic Self-Esteem ($r = .32$) Organisational satisfaction T1 ($r = .61$) Organisational satisfaction T2 ($r = .59$)</p>

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
13	Workplace Social Self-Efficacy (WSSE; Fan, Litchfield, Islam, Weiner, Alexander, Liu & Kulviwat, 2012)	Bandura's self-efficacy theory (86, 97) to articulate a conceptualization of a potentially malleable antecedent of social components of work performance. <i>Designed for use in the workplace.</i>	Study 1: full time employees ($n = 304$) Study 2: full time employees ($n = 137$)	22 items* Social Gathering factor ($\alpha = .90$) Public Performance factor ($\alpha = .92$) Seeking and Offering Help factor ($\alpha = .83$) Conflict Management factor ($\alpha = .81$)	Evidence based on test content: Interviews with 15 FTEs, followed by discussions with I-O Psychologists. Validity argument: WSSE strong and positive correlations with Perceived Self Efficacy Scale ($r = .67$), Political Skill Inventory ($r = .55$) and Organizational Based Self Esteem ($r = .53$) and Job related affective wellbeing scores ($r = .35$). Negative correlation with Physical Symptom inventory ($r = -.18$)
14	State Self Esteem Scale (SSES; Heatherton & Polivy, 1991)	Self-esteem is persistent and stable, and people actively seek information that confirms their self-concept and reject information that threatens their general view of self. However, situational factors can lead to momentary changes in self-evaluation. <i>Intended setting for use not stated.</i>	Study 1: undergraduates ($n = 428$); women ($n = 284$), men ($n = 144$) Study 2: undergraduates ($n = 102$); women ($n = 72$), men ($n = 30$) Study 3: undergraduates ($n = 128$); women ($n = 99$), men ($n = 29$) Study 4: undergraduates ($n = 79$), all women Study 5: obese women ($n = 18$)	20 items ($\alpha = .92$)	Evidence based on test content: 20 items from modified versions of Janis-Field Feelings of Inadequacy Scale. Validity argument: Correlations with Rosenberg Self-Esteem ($r = .72$), Marlowe-Crowne Social Desirability Scale ($r = .27$), Satisfaction with Height ($r = .40$) Satisfaction with current figure ($r = .54$) Negative correlations with Beck Depression Inventory ($r = -.71$), Trait Anxiety subscale of State-Trait Anxiety Inventory ($r = -.59$), state Hostility ($r = -.30$) Dietary Restraint Scale ($r = .42$), current appearance ($r = -.21$)
15	Full-Name Name-Liking (Gebauer, Riketta, Broemer & Maio, 2008)	Koole & Pelham, 2003, mere-ownership effect - the tendency to evaluate self-related objects more positively than self-unrelated objects e.g. preferring numbers that appear	6 studies with male and female participants from North America, South America, Europe, Asia, Africa and Australia ($n = 823$)	1 item α cannot be calculated for one item Test retest ($r = .85$)	Evidence based on test content: Based on theory, three measures of name-liking were developed. Validity argument: Correlations with Single item Explicit measure of Self-Esteem ($r = .35$), Self-Liking/Self-

No.	Measure	Conceptual foundation	Development sample(s)	Reliability of test scores	Evidence of validity
		in own date of birth than numbers that do not. This is extended to measurement of self-esteem as people extend their positive self-evaluation without conscious awareness that self-esteem is contributing. <i>Useful for future research.</i>			Competence Scale ($r = .30$) Explicit Measure of Self-Esteem ($r = .36$), Domain-specific Self-Esteem – Social Domain ($r = .30$), Domain-specific Self-Esteem – Physical Appearance ($r = .30$), Self-Deceptive Enhancement (.24) Negative correlation with Beck Depression Inventory ($r = -.29$) Observer Rater Anxiety ($r = -.47$). Ns correlation with Impression Management ($r = .11$)

*self-efficacy scales that use the response scale ratings recommended by Bandura (2006) for effective design of self-efficacy measures

**Self-esteem scales that measure both descriptive and evaluative as recommended by Bogan (1988)

Development samples marked in bold indicate a sample of participants who are in work.

Four of nine self-efficacy scales have used the response scale suggested by Bandura (2006). The standard methodology for measuring self-efficacy beliefs is where individuals are presented with tasks to which they need to record the efficacy of their efficacy beliefs on how certain or confident they are they can do the task. Bandura proposes a 0 – 100% scale, although a Likert scale is used in many. The important feature is about how the wording taps into individuals' *confidence* in their ability to do a task.

Only one measure uses both descriptive and evaluative measures of self-esteem. Bogan (1988) argues that measures only tapping descriptive information invalidate themselves in the conclusions they reach. According to Bogan, self-esteem is a dual process that requires two pieces of information – descriptive and evaluative. This is supported by James' (1890/1983) definition of self-esteem where he defined self-esteem as the degree to which the self is judged to be competent in life domains deemed important. If you were to measure an individual's self-esteem on the basis of how good they are at making lots of friends, and yet they based their self-esteem on having a few but very close friends then it would not be a fitting measure of their self-esteem.

Part 2: Psychometric Properties of Resilience Measures

Psychometric Properties of Self-Confidence Measures

We assessed the psychometric properties of 15 self-confidence measures using a construct validation approach as observed in Pangallo et al (2014). The construct validation approach was formulated into a three-stage framework by Skinner (1981). This can be seen in Figure 3. Stage one is theory formulation, where the content domain and theoretical foundations of the construct are defined. The internal validity phase is second, which involves test stability, internal consistency, and replicability. Thirdly, the external validity evidence phase looks at convergent and discriminant evidence of test scores. Skinner's validity evidence framework is used in combination with established empirical guidelines to determine specific criteria cutoff Pangallo et al (2014).

Method

Procedure: Applying the assessment framework. Each scale was assessed against six criteria and awarded points using a 3-point rating scale (as adopted in other systematic reviews, e.g. Pangallo, 2014). The purpose of this process is to systematically compare the measures, and identify strengths and weaknesses. Scales were allocated two points for fully satisfying the assessment criterion, one point for partially, and zero for not satisfying it. A seventh criteria 'Application' – a reference to the number of separate studies in which the instrument was used for empirical or validation studies - was rejected. This approach has been used in other systematic reviews of latent criteria (e.g. Mehling et al 2009, Pangallo et al 2014) However, the approach was found to be untenable in the context of self-efficacy and self-esteem. Most of the measures contained the terms 'self-efficacy' or 'self-esteem' which produced high volumes of results which were difficult to navigate through. Furthermore, authors were not always clear of the originating author for the specified scale used in their study. Another difficulty encountered was one specific case where multiple authors contributed to scale generation, then various authors published their own

version of the scale making. This made it difficult to conduct a fair comparison of measures on Application.

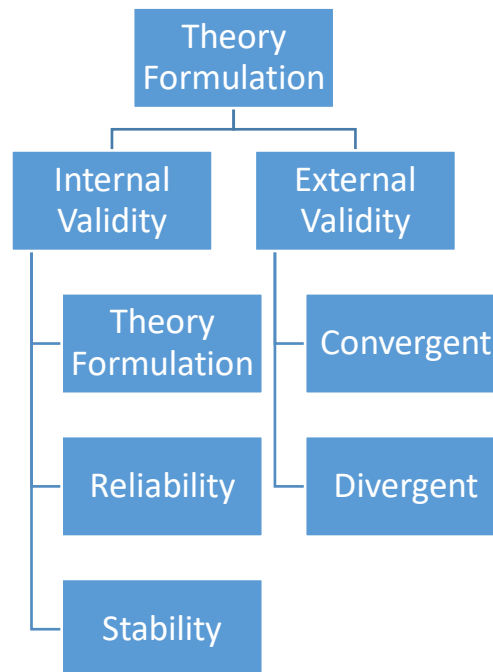


Figure 3 *Visual representation of Skinner's validity evidence framework*

The sum of all three categories (theory formulation, internal validity evidence and external validity evidence) produced an aggregate score, with a maximum of 12.

Pangallo et al (2014) determined the cut-off score to be 11/14 – 78% for a measure to possess “acceptable” psychometric properties. This review therefore has assumed 75% as a cut-off point; measures scoring 9/14 or above.

Table 3 *Quality Assessment Criteria*

Criterion	Definition	Score	Scoring criteria
Theory formulation			
Evidence based on test content	The extent to which the construct is comprehensively sampled by scale items.	2	Clear description of item selection AND involvement of target population AND subject matter experts in item selection/development
		1	Either target population OR subject matter experts NOT involved in item development/selection
		0	Incomplete description of item development/selection
Internal validity evidence			
Internal consistency	Extent to which (sub)scale items correlate to determine whether items are measuring the same construct.	2	Cronbach's alpha >.70 for total scale and/or subscales
		1	Cronbach's alpha values of <.70 for total scale and/or subscales
		0	Insufficient information
Stability	Scores on repeated administrations of same test highly correlated OR scores on similar version of same test highly correlated.	2	Values of >.70 for test re-test or parallel forms (>.75 if ICC reported)
		1	Test-retest or parallel forms <.70
		0	Insufficient information
Replicability	EFA followed by CFA to empirically support hypothesised factor structure.	2	CFA criteria for good model fit (TLI/CFI >.95, SRMR >.08, RMSEA <.08); OR EFA primary factor loadings >.60, absence of salient cross loadings with $n > 100$ AND >3 items per factor.
		1	EFA with $n \geq 100$ AND ≥ 30 -items per factor with loadings $\geq .60$ AND/OR cross loadings $\leq .32$; OR CFA does not meet good model fit and is NOT performed using separate sample from EFA.
		0	Insufficient information

Criterion	Definition	Score	Scoring criteria
External validity evidence ^a			
Discriminant evidence	Test scores showed negative correlations in theoretically expected directions with related measures.	2	Correlation of test scores $\leq -.30$ or more with theoretically distinct measure.
		1	Test score correlations with theoretically distinct measure $\leq -.30$; OR correlation with theoretically ambiguous measure
		0	Insufficient information
Convergent evidence	Positive correlations of test scores in theoretically expected directions with related measures.	2	Correlation of test scores at $\geq .30$ with conceptually similar measure
		1	Correlation of test scores at $\geq .30$ with conceptually similar measure OR correlation with theoretically ambiguous measure
		0	Insufficient information

Note. ICC = intraclass correlation coefficient; EFA = exploratory factor analysis; CFA = confirmatory factor analysis; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual; CFI = comparative fit index; TLI = Tucker–Lewis index.

^a Can also be evidence of criterion related evidence in absence of criterion measure (Cronbach & Meehl, 1955).

Results

Results from the systematic assessment are presented in Table 4. The 15 self-confidence measures were evaluated against criteria outlined in Table 3.

A zero score is not necessarily indicative of low quality, but insufficient description or information to evaluate the measure sufficiently.

Table 4 Quality Assessment Rankings of Resilience Scales

Assigned number	Scale	Theory formulation	Internal Validity Evidence			External Validity Evidence		Total Score	
			Internal Consistency	Stability	Replicability	Discriminant Evidence	Convergent evidence	12	%
1	PSSE	1	2	2	0	2	2	9	75
3	SSES	1	2	2	1	1	2	9	75
5	SLSC	1	2	2	2	1	1	9	75
6	CBSES	1	2	2	1	1	2	9	75
8	OCCSEFF	1	2	0	2	2	2	9	75
13	WSSE	2	2	0	2	1	2	9	75
2	USRS	1	2	0	0	2	2	7	58
12	OBSE	1	2	2	0	0	2	7	58
14	SSES	1	2	0	0	2	2	7	58
9	NGSE	1	2	1	0	0	2	6	50
10	LSE	2	2	0	0	0	2	6	50
11	SEW	2	0	1	0	1	2	6	50
15	FNNL	1	0	2	0	1	2	6	50
4	SES	0	2	0	0	1	2	5	42
7	S-OCCSEFF	1	2	0	1	0	1	5	42

Five measures scored 9 points out of a possible 12 (PSSE, Strengths SES, CBSES, OCCSEFF, WSSE, SLSC) indicating measures with acceptable psychometric properties. Only three measures indicated systematic construct development. Fourteen measures demonstrated strong internal consistency. Two measures were constructed in such a way that reporting it was not possible; FNNL had only one item only, SEW had no pre-constructed items. Six measures fulfilled a high standard for test stability (PSSE, Strengths SES, SLCS, CBSES, OBSE, FNNL) and three for replicability (SLSC, OCCSEFF, WSSE). Only four measures reported or met the requirements for discriminant evidence (OCCSEFF, PSSE, USRS, State SSE) and thirteen satisfied the convergent evidence criterion (not SLCS, S-OCCSEFF).

Discussion

The themes that emerged from the data showed some interesting patterns across the measures. Competence was measured by self-efficacy and self-esteem scales but not the unconditional self-regard scale. Social/communication was only measured by self-efficacy measures, as was seeking and offering help. Relationship with self was only measured by self-esteem scales, as was appearance. These patterns suggest that whilst there is overlap, self-esteem and self-efficacy are distinct concepts. Whilst some authors muddy the water between self-efficacy and self-esteem, using the terms or concepts interchangeably, Maddux (2005) has a clear line. His points towards self-esteem as being a trait or trait-like. Self-esteem is not a personality trait, rather it is beliefs about one's ability to coordinate skills and abilities to attain desired goals in certain domains, and circumstances. Furthermore, part of the confusion regarding self-esteem and self-efficacy may stem from the contemporary psychological understanding that self-esteem is rooted in four ideas, one of which is efficacy.

Six measures were deemed to have acceptable psychometric properties. Of these, 50% were social self-efficacy scales, a facet of global self-efficacy. Whilst this is a useful construct to measure, it does not measure the entirety of self-confidence. The remaining measures were the Strengths Self Esteem Scale (StrSES), the Occupational Self Efficacy scale (OCCSEFF), and the Self-Liking Self-Confidence (SLSC) scale.

Despite these tools measuring just one or two of the themes that arose in the thematic analysis, might they be useful for helping coaches, trainers or Human Resources professionals working with individuals who wish to build their self-confidence?

There is a risk that using either the StrSES or OCCSEFF may lead to maladaptive behaviour. The pursuit of strengths is popular in contemporary workplace psychology, such as strengths based-leadership (Rath & Conchie 2008) and evidenced by the decades of research Gallup has conducted to understand strengths development in the workplace (Clifton & Harter, 2003). However, it raises the question of whether individuals become unable to learn or deal with difficulties and challenges as they are consistently encouraged to only do what they are good at. Returning to consider growth and fixed mindsets once more (Dweck, 2017) we can see how only engaging in things we are naturally good at prevents an open, exploratory, and challenging approach to learning and developing the self as individual.

In a similar vein, OCCSEFF is focused on achieving and always being effective. This also can lead to maladaptive behaviours such as perfectionism and procrastination as there's no room for growth, mastery, innovation and other self-actualising workplace behaviours that require openness to learning and acceptance of self as flawed.

The Self-Liking Self-Confidence scale (SLSC) is perhaps the closest to a well-rounded scale from the six that have reached standards of psychometric suitability. It captures an individual's *relationship with self* and their beliefs in own *competence*. This provides a combination appropriate for the workplace as it intuitively does not make sense to have one aspect measured without the other. However, the tool still only measures two of the five themes that arose from our analysis. Furthermore, it was designed with a sample population of students and was validated in terms of academic, social, athletic and creative. It does however have good face validity for the workplace and was validated by paying attention to evaluative as well as descriptive factors.

On this basis, only one of the scales shows some potential for supporting the development and personal growth of a well-adapted, confident individuals. Researchers who argue self-esteem can be positive, empowering and all that

jazz are linking it with authenticity (Kernis, 2003). Yet the dimensions of authenticity aren't fully captured by any of the measures in this review. If we look at the factors in Wood et al's (2008) theory of authenticity, we can see that the State Self-Esteem Scale (SSES) comes closest to measuring the three areas stipulated necessary for authentic living – namely awareness of physiological states, emotions and cognitions. However, one's satisfaction with one's appearance does not by any means ensure one is aware of one's physiological states. Furthermore, the State Self Esteem Scale did not achieve the required 75% score on its psychometric properties.

Considering the scales in these terms, it gives rise to the question of how one obtains a well-rounded measure of self-confidence that is useful in the workplace to help individuals who lack self-confidence, develop it. Arguably, until one is aware of where one's low self-confidence is stemming from, it is difficult to develop it.

One of the problems that seems to be inherent across most of the measures included in this review is that the scales are imposing, rather than measuring a true reality of an individual's confidence. Two of the fifteen scales do not rely on pre-conceived notions of confidence. Full Name Name Liking (FNNL) is shown to be measuring implicit self-esteem, and does so on just one question 'How much do you like your name?' However, just receiving a general measure of implicit self-esteem gives trainers and/or coaches little to go on to start working with someone who wants to develop their self-esteem.

The Self Esteem Worksheet (SEW) requires the participant to identify the areas relevant to self-esteem, to rate the importance of each area and then rate their perceived success in each area. This scale seems to provide a great idiographic way to measure self-confidence, and would certainly provide coaches and development consultants with a relevant and meaningful starting place for developing an individual's self-confidence. However, the development of the scale doesn't meet the psychometric demands of Skinner's framework, scoring just 50%.

An interesting outcome from the research of Overholser (1993) was in the analysis of participant's responses. It transpired that self-esteem for men was more heavily influenced by task success. Women put more emphasis on social

relationships and personal qualities. If Overholser's findings are still true 24 years on, then it might just shed some light on why women tend to report lower levels of confidence than men, as self-confidence is frequently measured using task based tools or measures – self-efficacy is essentially one's belief in completing a task.

There are other gender differences that can be observed in this review of scales. The *Social Gathering* items in the Workplace Social Self-Efficacy scale (WSSE) appear on the face of it to be culturally bound to North America, and potentially masculine behaviour in the workplace. Items include 'Taking part in group lunches or dinners with your co-workers' and 'Participating in games night with your colleagues'. As Eagly & Carli (2007) discuss, social networking is often the realm of men in the workplace. They propose there is a male culture to socialise in venues that are not welcoming of women such as strip bars. Whether this behaviour still goes on is beyond the reach of this study. However, women still take a disproportionate amount of responsibility for child care and unpaid work within households, 60% more than men (The Modern Families Index 2017), and so this real-life restriction must impact their responses to such items.

Seeking and Offering Help is another subscale on the WSSE. It is arguable that there are different cultural rules regarding asking for help in the workplace. Researchers have shown that women face discrimination and have to prove themselves more than men. This is illustrated in a study by Moss-Rascusin et al, (2012). They found experimental evidence of discrimination when university science faculty members rated a male applicant as significantly more competent than the (identical) female applicant. Women trying to prove their competency to co-workers may be reluctant to ask for help as it will be interpreted differently to if a man does, especially in a male dominated industry. On the other hand, offering a co-worker help is much more likely to be comfortable for a woman than a man as women are expected to fulfil communal roles, and men fulfil agentic roles (Eagly & Carli, 2007)

Limitations and future research

This paper has limited capacity to review the face validity of the measures. The PSSE is intended for use in the workplace but contains a number of items that render the test unsuitable for use in the workplace setting. Such items are 'Get a

date to a dance that your friends are going to' and 'Ask someone out on a date'. In FNNL there is just one question about how much you like your name. Such measures are unlikely to have the credibility required for the workplace.

The themes that arose from the analysis are broad, and lack definition. Whilst they are useful at helping understand the make-up and coverage of the scales reviewed in this study, they do not provide a richer or deeper understanding. For example, relationship with self does not provide any insight as to whether the relationship with self is a healthy one, or an ego-driven one as many other authors have accused of the self-esteem theory. A deeper analysis of the content of the scales could be beneficial in helping HR professionals/consultants know whether to use tools to help aid the development, and ensure that the individual develops healthy self-esteem rather than maladaptive self-esteem.

This paper set out to review self-confidence scales. The scales yielded from the search terms were self-efficacy, self-esteem and unconditional self-regard. Whether these scales actually measure self-confidence has not been answered in this study. Further research is necessary to establish what self-confidence is. Is it the same as one of the three constructs? Is it comprised of one or more of the three constructs? Is it a broader construct than self-efficacy, self-esteem or unconditional self-regard?

Conclusion

This paper provided a comprehensive review of self-confidence scales, a thematic analysis of their content and an evaluation of the psychometric properties through a robust review using Skinner's (1981) validity evidence framework. The measures were also reviewed using dispositional authenticity (Wood et al, 2008). Six of the fifteen measures demonstrated acceptable psychometric properties (PSSE, StrSES, SLSC, OCCSEFF, WSSE, CBSES). Of these the SLSC was predicted to be the least likely to lead to maladaptive behaviours, yet it requires validation within the workplace. Of all fifteen scales, the StaSES aligned most conceptually consistent with dispositional authenticity, although it was not fully aligned and did not demonstrate acceptable psychometric properties.

For coaches, consultants and HR professionals to gain a full and in-depth understanding of self-confidence, in order to be able to help individuals and teams grow and develop in the workplace, further research from a broader perspective would be advantageous. It is proposed that Wood et al's (2008) framework of authenticity will be a useful method of opening out the exploration of the construct.

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Self-confidence at work; the development of a dynamic conceptual model

Abstract

Great importance is placed on self-confidence in the workplace and yet our understanding of what it is and how it can be developed is limited. Current approaches are static and focus on personal attributes, cognitive and motivational aspects over physiological experiences and pay insufficient attention to diversity. Using an embodied interview approach with a diverse sample of 27 employees, we propose a conceptual model of self-confidence that contains the components of authenticity, competence and connectedness. Our model is unique in that it captures the dynamics of loss of confidence and building a confident performance, and identifies the role mindset plays. We discuss how our research has contributed to the literature, and reflections, relationships and support from the literature. Finally we make recommendations for future research.

Introduction

"It's a shame to be me sometimes. Which is the lack of confidence" Kim, Business Leader.

The \$9.9 billion value of the United States self-help market in 2017 (Marketdata Enterprises Inc, 2017) is likely due in part to the strong relationship between self-confidence, happiness, wellbeing and performance. Evidence suggests self-confidence plays an important role in the workplace, influencing individuals, teams, leaders and organisations. Strong relationships have been found between low self-confidence and depression, anxiety and social anxiety (Baumeister, Campell, Krueger and Vohs, 2003; Deci and Ryan, 1995; Leary, 1990; Sowislo and Orth, 2013). While high self-confidence has been associated with a diverse range of workplace outcomes including improved training effectiveness (Lee Endres, Endres, Chowdhury and Alam, 2007), higher

likelihood to use new technology (Jorde-Bloom and Ford, 1988), job performance (Judge and Bono, 2001) and tenacity in challenging careers (Lent, Brown and Hackett, 1994) among others. Among co-workers, high self-confidence has been seen to promote productive working practices such as sharing complex knowledge (Lee Endres et al, 2007), speaking up in groups and pursuing intentions to make improvements by challenging the status quo (LePine and Van Dyne, 1998).

Interestingly, unhealthy practices have also been found to arise in the workplace when individuals seek to bolster and maintain their self-confidence. Stereotyping and prejudice can occur when individuals need some self-affirmation, rather than having to confront the real sources of the self-image threat (Fein and Spencer, 1997). Individuals with high self-confidence are more likely to use downward comparisons with less fortunate or skilled others (Crocker, Thompson, McGraw and Ingerman, 1987; Wills, 1981), arguably this high self-confidence maintenance behaviour can lead to maladaptive behaviour such as always looking for and highlighting flaws in others.

Self-confidence has been linked to leadership success (Cavallo, 2006; De Cremer and Van Knippenberg, 2004; Kirkpatrick and Locke, 1991; McCormick, 2001). Leaders are required to take necessary risks to work towards organisational visions and objectives; self-confidence helps drive this behaviour (Black and Porter, 2000) and enhances the likelihood of a desired response in their followers (Luthans and Peterson, 2002). Yet leadership self-confidence does not exist in a vacuum. Most theoretical leadership perspectives recognise leadership as a relational property within group processes (Hogg, 2001), and self-confidence is widely recognised as a social construct (Bandura, 1999; Hewitt, 2005). This social nature of leadership style has implications for self-confidence as tyrannical leadership and bullying can result in low self-confidence for followers (Ashforth, 1994; Matthiesen and Einarsen, 2007). A potentially unexpected solution is to enhance the leader's self-confidence, as it is an important predictor of transformational leadership (Matzler, Bauer and Mooradian, 2013). Benefits include a negative relationship with workplace bullying, as transformational leaders may create conditions where bullying is less likely to occur, minimising the social, psychological and psychosomatic problems bullying can cause for the victim (Dussault and Frenette, 2015).

As well as having personal and interpersonal implications at work, self-confidence is important from an organisational perspective. It is viewed as a valuable mechanism for motivating human resources (Deci and Ryan, 1995; Stajkovic and Luthans, 2003), spotting and developing new business opportunities (Zhao, Seibert and Hills, 2005) and reducing employee turnover (McNatt and Judge, 2008).

While self-confidence has been found to have a broad impact across the workplace for individuals, teams, leaders and organisations, there is no consensus on what self-confidence is. For professionals attempting to develop self-confidence in individuals and those who are researching its impact, working across relevant fields such as executive coaching, learning and development, equality, diversity and inclusion, human resources and organisational development, it is important that there is clarity on what self-confidence is and that they are equipped to measure it.

Current conceptualisation and measurement of self-confidence

Self-confidence is clearly important, yet despite widespread use of the term, researchers predominantly use the concepts of self-efficacy or self-esteem when seeking to measure it (Kane, Yarker and Lewis, 2018 under review). In the wider literature, authors frequently use the term self-confidence interchangeably with either self-esteem or self-efficacy (Benabou and Tirole, 2002; Bogan, 1988; Chemers, Watson and May, 2000; Lenney, 1977; Hollenbeck and Hall, 2004; Kolb, 1999; McCarty, 1986; Shipman and Mumford, 2011; Stajkovic and Luthans, 1998; Stankov, Kleitman and Jackson, 2015). In addition, the conceptual overlap between self-efficacy and self-esteem is well recognised (Brockner, 1988; Tarafodi and Swann, 2001). Personal self-efficacy is an individual's belief in their ability to succeed in a specific situation or complete a task (Bandura, 1977), whilst authors tend to define self-esteem as the evaluative dimension of the self-concept (Blascovich and Tomaka, 1991; Benabou and Tirole, 2002; Baumeister et al, 2003; Hewitt, 2005) such as self-acceptance, self-worth and self-liking (Kernis, 2003).

However, in measuring self-confidence the variations do not stop there. Both self-esteem and self-efficacy can be specific, with measures capturing a specific task or situation; global, referring to the general or a non-specific situation

(Blascovich and Tomaka, 1991; Baumeister et al., 2003; Kernis, 2003; Rosenberg, Schooler, Schoenback and Rosenberg, 1995); or collective/social, stemming from memberships to groups or categories (Bandura, 2000; Luhtanen and Crocker, 1992). In critiquing self-esteem, Kernis (2003) observes it can also be fragile, secure, or optimal; indicating the extent to which the self-esteem is genuine and stable. Further distinctions include state self-esteem which is related to the immediate situation, and trait self-esteem which refers to a compilation of the individual's history (Leary, 1990). The many self-esteem distinctions may sit behind the conclusion that self-esteem measures often do not perform adequately (Boyle, Saklofske and Matthews, 2015; Kane et al, 2018, under review).

This interchange of terms and concepts can have implications for researchers and practitioners when wishing to research, measure and apply such constructs in workplace settings. Blascovich and Tomaka (1991) reviewed self-esteem measures whilst Stankov et al. (2015) reviewed self-efficacy measures and yet both reviews featured the Personality Evaluation Inventory. Such overlaps have potential to cause confusion for those turning to the literature for guidance on the best tools to use. Consider the real-life implications of a low self-efficacy leader coming to an executive coach whose confusion from the literature caused them to work on low self-esteem with the leader, they would be unlikely to solve the leaders' issue to satisfaction and may actually cause further issues of developing a hubristic leader. It would therefore seem that a systematic review of the existing self-confidence measures is necessary.

In an effort to gain clarity, Kane et al (2018, under review) examined how self-confidence is measured in the academic domain, as a representation of an established conceptualisation. They conducted a systematic review of measures of self-efficacy, self-esteem and unconditional self-regard measures, identifying 15 relevant measures. Five themes were found i) Relationship with self ii) Competence, iii) Seeking and Offering Help, iv) Social/communication, and v) appearance. Self-efficacy and self-esteem were found to be thematically distinct. Self-efficacy was comprised of competence, social/communication, and seeking and offering help, whereas self-esteem was comprised of relationship with self, appearance and competence. The findings broadly align with the literature definitions provided earlier. However, Kane et al (2018, under review) also

conclude that current measures have a number of methodological limitations and conceptually; these measures do not comprehensively measure the construct of self-confidence, particularly within work place settings.

Overcoming the limitations of existing conceptualisations and measures of self-confidence

Kane et al. (2018, under review) identified three main limitations of existing measures of self-confidence. These include the static nature of self-confidence measures, omission of embodiment or physiological factors, and limited diversity of participants used to develop measures. These limitations, and the proposed alternative methodologies to counter them, are discussed here with reference to the proposed aims of the current study,

Static nature of self-confidence measures: We have seen from the workplace research that self-confidence does not operate entirely in a social vacuum. Gruenewald, Kemeny, Aziz and Fahey (2004) show that interactions where the social self is threatened, cognitive, emotional and physiological responses including loss of self-confidence, a sense of shame and increased cortisol are elicited. This research implies that self-confidence is not a static phenomenon, and that it functions within a social context. Yet most existing models tend to set out to conceptualise and measure self-confidence as a static construct without attention to the social context.

For example, the Self-Liking and Self-Competence scale, a robust and well-designed measure, conceptualizes global self-esteem as having two dimensions: a sense of social worth – self-liking, and a sense of personal efficacy – self competence. Self-liking and self-competence is then measured by asking respondents how much they agree or disagree to statements such as “I like myself” and “I tend to devalue myself” (Tarafo di and Swann, 1995: 341). This measure essentially provides a baseline rating of an individual’s self-confidence. This is useful but restricted in application as ‘static’ conceptual models do not provide insight into what happens when one loses self-confidence or needs to build the confidence to perform at work.

Furthermore, many scales measure an individuals’ efficacy or esteem based on personal attributes. Whether in relation to private or interpersonal domains this emphasis on the personal offers only a partial view of the individual and their

social interactions (Luhtanen and Crocker, 1992). We therefore propose that the conceptualisation of self-confidence should be a dynamic and socially constructed model. To address this limitation we propose an embodied methodology, In the literature, embodiment is seen as both a state of the body and an interaction with other bodies in the social environment (Merleau-Ponty, 1945:2012; O'Loughlin, 1998; Perry and Medina, 2011, Ellingson, 2017).

Thoughts, feelings and behaviours are experienced from within one's body and arrive into awareness through the senses (Meier, Schnall, Schwarz and Bargh, 2012; Tania, 2014). Pursuing an embodied methodology will allow the social and dynamic nature of self-confidence to emerge. In this research, embodied attention will be paid to the experiences of low confidence as well as high confidence, and participants will be invited to explore the experience from both an individual and a social perspective.

Omission of embodiment and physiological factors. In the extant literature, cognitive and motivational aspects prevail, whilst physiological factors have been largely overlooked. Bandura (1977) refers to physiological states as one of the four principal sources of information in personal efficacy expectations, yet some measures featuring in our review did not acknowledge the importance of physiological states despite being based on Bandura's (1977) self-efficacy theory (Schyns and von Collani, 2002; Sherer and Maddux, 1982). Physiological states were recognised as important by some researchers who developed measures and yet physicality or embodiment of self-efficacy was not present in their methodology (Fan, Litchfield, Islam, Weiner, Alexander and Kulviwat; 2012; Smith and Betz; 2000). Embodiment has been linked with higher self-esteem (Tolman, Impett, Tracy, and Michael, 2006; Impett, Henson, Breines, Schooler and Tolman, 2011), and researchers have validated self-esteem measures by examining correlations with factors that are arguably physiological as well as psychological such as social anxiety, wellbeing, depression and stress (Betz, Wohlgemuth, Serling, Harshbarger and Klein, 1995; Tarafodi and Swann, 1995). However, the same authors do not acknowledge physiological states as being important nor reflect embodiment in their methodology. In this research, interviewers will recognise and harness the importance of the embodied state through its embodied methodology.

Limited diversity of participants used to develop measures. Authors have been criticised of paying too little attention to the diversity of participants when developing measures to assess self-esteem (Blascovich and Tomaka, 1991). Kane et al (2018, under review) noted this more widely for self-confidence measure development where there is a tendency to utilise samples of school children, adolescents and university students. It was often not possible to ascertain if samples were diverse with regards to factors such as sexuality, ethnicity, socio-economic status, job role and industry. Authors frequently used high level descriptions, such as “the total sample consisted of 301 participants” (Greive, Wittenveen, Tolan and Jacobson, 2014:72), who in this instance went on only to provide numbers of men and women and mean age within the sample. With increasing recognition of a diverse working population, there is need to consider how well, or not, the current conceptualisations and measures reflect the broad range of experiences. We propose that an adequate measure of self-confidence should be built on a conceptual model of self-confidence that has been developed using a diverse sample of workplace perspectives.

The sociometer theory is relevant here. Leary, Tambor, Terdal and Downs (1995) found that self-confidence functions as a sociometer that monitors others’ reactions to self and drives own behaviour change to minimise the likelihood of exclusion and maintain self-confidence levels. The implications for this theory are ambivalent. Arguably it may drive more civil behaviour in the workplace, minimising anti-social displays of emotions and behaviour such as anger. However, is also conceivable that it may prevent true diversity and inclusion in the workplace. People are motivated to attain and maintain membership in a variety of groups including occupational groups, avoid involuntary exclusion and move toward maximal inclusion (Leary, 1990). On this basis, individuals from minority groups may feel compelled to hide their true identity, values or preferences. A homosexual may conform to group norms by hiding their sexuality and not jeopardizing their standing in a predominantly heteronormative workplace. A neurodivergent worker keen for promotion may not claim necessary workplace reasonable adjustments for fear of instilling doubt in others of their ability and willingness to contribute to the work of the team; the opportunities for over-correcting one’s true self are untold.

In this research, a diverse sample will be engaged by including transgender and

cis women and men, non-binary individuals, and a range in terms of ethnicity, sexuality, socio-economic status, age, profession and industry.

Existing conceptualisations and measures of self-confidence overlook the role of social context and physiological factors, and do not reflect the diversity and complexity needed to develop and measure self-confidence in the workplace. As such this study draws from a qualitative approach to develop a contemporary model of self-confidence in the workplace that aims to overcome the limitations of existing conceptualisations and measures.

Method

Participants: Driven by our awareness that historically insufficient attention has been given to possible group, subcultural and cultural biases in self-esteem assessment (Blascovich and Tomaka, 1991), we adopted a two-stage approach to recruit interview participants to ensure representation of minority groups. At the first stage, a 13-question survey was used. It established participants' working status, work experience, industry, occupation, age, gender, sexuality, ethnicity, socio economic status, these questions were designed to gather participant background data to ensure participants would reflect a diverse range across all categories. Participants were asked about their level of confidence at work to ensure we interviewed participants both high and low in self-reported confidence. We asked about level of importance placed on work to reassure us that high self-confidence didn't come from a place of 'laissez faire' or complacency. Finally, we asked about respondents' interest in being interviewed so that we could invite them to take part.

A number of workplaces were approached and agreed to distribute the survey via their staff networks such as LGBTQ+, Women, BAME, Disability, Carers; specific targeting of Facebook transgender and non-binary support groups who facilitated recruitment of non-binary individuals; and through social media and professional networks. This approach was successful in eliciting 531 responses to the survey. 211 provided their email address as a means of agreeing to be invited to be interviewed. Using the data gathered during the survey, we carefully selected and invited a purposive sample of participants were to take

part in the interviews. Care was taken in selecting participants to ensure a range of ethnicity, sexuality, genders, socio-economic statuses, ages, professions and industries were represented. We chose participants by their demographics to ensure no one group was over or under represented. For example, selecting a 60-69 year old would take selection preference over a 50-59 year old as there were higher frequencies of the latter. A mixed/multiple ethnic or black/African/Caribbean background would take selection preference over an English/Welsh/Scottish/Northern Irish/British background, also due to higher frequencies of the latter category. Our aim was to achieve a good spread within each demographic wherever possible. We also sought to interview an even split of low and high confidence individuals from each gender category (female, male and non-binary).

Ethical considerations were given to ensure participant anonymity, informed consent was received, vulnerable participants were treated with appropriate care and consideration and participant data was stored securely. At all stages, participants were provided the opportunity to decline answering any questions, and to withdraw from the research. A one-day workshop was developed by Researcher One and run with Researcher Two to ensure inter-researcher reliability between interviews, teach the embodiment technique, improve and develop interview skills. The workshop included role plays, body awareness practices, a full-length run-through of a practice interview and a detailed discussion on using the interview guide. The researchers conducted 27 seven interviews lasting on average 60 minutes, which were audio recorded and transcribed verbatim either by the researcher or a professional transcription service. Having completed the interviews, we felt it would be interesting to report the participants' neurodiversity, mental and physical disability. A second survey was emailed to collect this data.

Table 1. Participant demographics

Working Status:	Currently not working 2	Part time 7	Full time 18			
Work experience:	0-2 years 3	2-10 years 3	10+ years 21			
Industry:	Construction 1	Transport and communication 2	Other services 11	Public admin, education and health 11	Energy and water 1	DNS* 1
Occupation:	Government 7	Unemployed 2	Sales and office 1	Service 2	Management, professional and related 15	DNS 1
Age:	18-29 7	30-39 5	40-49 4	50-59 9	60-69 1	
Gender:	Female 10	Transgender female 1	Male 9	Transgender male 1	Non-binary 6	
Sexuality:	Bisexual 5	Gay or lesbian 3	Heterosexual 16	Other 3		
Ethnicity:	English/Welsh/Scottish/Northern Irish/British 21	Other mixed/multiple ethnic b'ground 1	Irish 1	Other black/African/Caribbean background 2	Other White background 1	
Socio Economic Status:	Lower middle 8	Middle 6	Upper middle 7	High 5		
Neurodiversity:	Neurodivergent** 8	Neurotypical 17	Didn't know 1	Did not say 1		
Physical disability:	Physical disability*** 4		No physical disability 22	Did not say 1		
Mental disability:	Mental disability 0	No mental disability 22		Did not say 1		

*did not say

**Dyspraxia, Dyslexia, Attention Deficit Hyperactivity Disorder, Dyscalculia, Autistic Spectrum, Tourette Syndrome, and others

***2 reported their disability unprompted (1 had arthritis in fingers and 1 was hearing impaired)

We have used singular 'they' 'their' 'them' 'themselves' for all participants regardless of their gender identity, and all names are pseudonyms to protect their identity

Interview: The interview was semi-structured, with two main questions; one requesting an example of when they felt high in confidence, the second when they felt low in confidence. Probing questions were designed to explore physical, emotional, cognitive and speech experiences.

Example questions include: Please take a moment to bring to mind a specific time when you were very confident at work. Describe the situation. How was your inner dialogue? To what extent were your emotions private or social interactions? Was there anything you noticed to the touch / taste / smell / texture / temperature? How was your speech?

An embodied interview approach was used throughout. Embodiment is both a state of the body and an interaction with other bodies in the social environment (Merleau-Ponty, 1945:2012; O'Loughlin, 1998; Perry and Medina, 2011, Ellingson, 2017). The embodied approach to research serves to empower "public intellectuals to spark positive social change, particularly with underserved and marginalised communities" (Ellingson, 1: 2017). There is also a wider call for greater attention to the body in organisational and leadership development research on the basis that research not taking account of physiological processes is incomplete; researchers are seeing great promise in bringing the body back into accounts of social relations. (Boyatzis, Smith and Blaize, 2006; Wright and Diamond, 2006; Heaphy and Dutton, 2008) We started the interview with a body awareness practice to facilitate the embodied interview, which both the researcher and the participant took part in a just before the start of the questions. This practice brings both individuals intentionally into their bodies, so their dialogue is more than an exchange of words. Cognisant of the potential ethical implications of the participant-researcher power play, the option to decline the body-awareness practice before the main interview was offered; all except one participant took part.

Analysis

Braun and Clarke's (2006) Thematic Analysis framework was the basis for our analysis as Braun and Clarke regard it as a method that allows the researcher to identify, analyse and report patterns within data. It was important to choose a methodology that enabled description of patterns across qualitative data. Other

such methodologies that achieve this goal such as Interpretative Phenomenological Analysis (IPA) were not deemed as suitable. IPA is intended for studies with small sample sizes that aim to understand something in detail rather than make more general claims (Smith and Osborn, 2008) whereas our aim was to include a broader sample and search for patterns of self-confidence that can be generalised.

I, Researcher One, started with gaining familiarity with all 27 interviews; systematically listening to the audio recordings, reading the transcripts and then listening and reading at the same time. All analysis was conducted from a place of embodiment, as Ellingson (2017) terms it, body-self, a term used to resist the mind-body dichotomy. At familiarisation phase not only was I gaining familiarity with the content of each interview, I was also starting to gain familiarity with my embodied response to each participant. I wanted to be aware of my resistances, my annoyances, my likes, my admirations to name but a few. I knew these could bring insights, but also prevent insights if I allowed them to go unobserved.

I did not want to be restricted by one tool. My initial coding was a process of mindmapping. Mind mapping is considered to be an effective tool for gathering, interpreting and communicating large quantities of complex information, and ideal for capturing ideas and insights (Mento, Martinelli and Jones, 1999). I put the transcripts aside, and mapped all initial thoughts relating to 'low' and 'high' confidence. At this point they could not be categorised as codes or themes; I did not censor what I wrote or where I wrote it. What I had absorbed from reading the transcripts was re-emerging onto the mindmap. I re-read the transcripts at speed and did further mindmapping using a different colour pen, populating the mindmap with more notes which either built on existing notes or added new content. Next I coded the data on Excel and then repeated the process on Nvivo before comparing all three outputs. It resulted in overlapping, unique and contradictory codes. In Ellingson's words (2017) I was "holding space for philosophical contradictions without resolving them".

In my search for themes from the many codes I moved back and forth between Nvivo and sheets of A3 paper. It would become apparent from my body-mind when I needed to switch. I listened carefully to the data, taking an inductive approach. I listened carefully to my mind-body to guide my analysis. At moments of analytical paralysis, I used meditation to sense into my body for guidance or

practised meditative movement which has also been termed 'Percolating Data' (Daza and Huckaby, 2014). At one point it felt necessary to read the examples of low confidence and capture the essence of each participants' story. I noticed a light rising of fear, fear of unfaithfulness to the steps of Thematic Analysis, yet was reassured through Childers (2014) encouraging 'promiscuous analysis' as a more effective means of gaining insight than a loyal or prescriptive approach.

I carefully stepped back and forth between the phases of searching for themes, reviewing themes, defining and naming themes, a process encouraged by Braun and Clarke (2006). It was also essential to allow the themes to emerge via iterative discussions between Researchers One, Three, Four and Five in order to reach the final phase of producing the final construct.

Whilst allowing themes to emerge, I also moved back and forth between data and theoretical literature. Mazzei and Jackson call this "plugging one text into another" (746: 2012) and view the process as one of opening up knowledge and of proliferation, as opposed to ruling out and simplifying. The process resulted in five first order themes, each with second order themes.

Results

Four overarching themes were identified in the analysis: authenticity, competence, connectedness and mindset, each with sub-themes (see figure 1). However, rather than discrete themes, the data suggested a dynamic model.

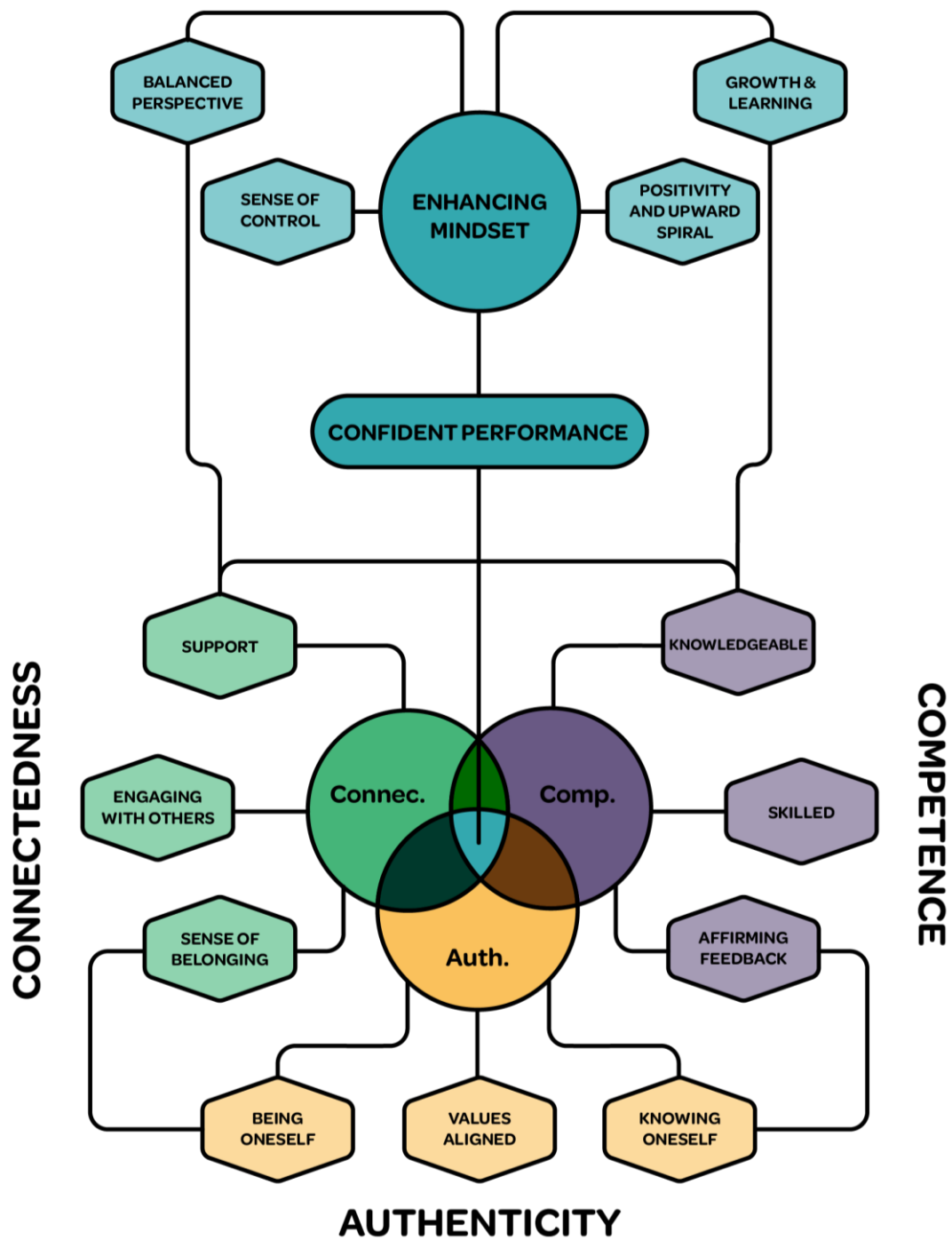


Figure 1. Illustration of the four components *authenticity*, *connectedness*, *competence*, and *enhancing mindset*.

We propose self-confidence is composed of three interrelated *components*; *authenticity*, *competence* and *connectedness*. When all three components are in place and interacting, the response can be a *confident performance*. The

confident performance can feel like an upward spiral, unless there is a failure to fully manage oneself, then *loss of confidence* is possible.

When one or more of the components is missing or removed, our findings suggest that the reaction is likely to be *loss of self-confidence*. *Loss of confidence* was described as feeling like a downward spiral. Most participants reported the need to experience all phases of loss before a shift occurs, and that the shift usually happened when the missing component(s) are (re)introduced. If the shift is not experienced, then the individual risks remaining in a state of loss of confidence.

Mindset tended to act like a valve or magnifying glass for many of our participants. An *enhancing mindset* tends to strengthen a *confident performance* and helped individuals move quickly through the loss phases with clarity. Those who described a *depreciating mindset* also reported that this intensified *loss of confidence* and prevented individuals from making the shift through to a *confident performance*. It also appeared to blur the stages of *loss of confidence* or create resistance to the phases and which in turn tends to slow down or even freeze the process.

The overarching themes and subthemes are presented in detail here and an illustration of the dynamic nature of the model can be found in figure 2 at the end.

Authenticity is the first of three components, see Figure 1. Many participants such as Rowan explained how they were more confident at work when *knowing themselves*, and Frankie when *working in line with their values, preferences, principles and strengths*:

“These days I am fairly self-confident. I know myself very well. Uhm, a long time in an illness will do that, uhm it will make you assess your priorities and work out what really matters” Rowan, 19

“I felt very confident in feeding that back to people because err, I'd gone through all the logical steps. Erm, it was, it's kind of err, err, allows me to use my sort of most developed skills around problem-solving and erm, logical thought” Frankie, 46

Others emphasized the importance of *being oneself; their inner experience of thoughts, emotions and physical experiences aligning with one's outer experience*. Jesse is telling the interviewer their internal dialogue to begin with

and then they switch to explaining how physically expressing their gender identity impacts their confidence at work when giving a presentation:

“OK, you've been going out in a skirt and tights for a good few years now erm, ten years before that I couldn't have imagined myself having the confidence for that and I still don't know exactly where that confidence comes from. Erm, and it's just just that I've made at least part of that change helped me to get through the presentation.” Jesse, 195

Those who lacked authenticity in low confidence moments described themselves as working in ways that do not align with their *values, preferences, principles and strengths*.

“I came into the role, my first ever policy role not wanting to do policy, being quite frankly, surprised they'd actually selected me at interview” Elliot, 89

Narratives of *not being oneself*, feeling fake, inauthentic, *hiding their inner experience or feeling disconnected between their inner experience and the outer experience* were prevalent:

“In the end it's like it's a fake me at the job, it just doesn't feel like me that they're communicating to. It doesn't feel like even if I appreciated someone, I couldn't stay in touch afterwards because it's like it's not me that they know” Alex, 402

Participants such as Ali talked about *not being familiar with themselves*, experiencing a delay in noticing their own confidence-lacking behaviour:

“I go quiet and mumble. Erm, not necessarily at the time, straight away, but I do notice it” Ali, 207

Competence is the second of three components. Participants frequently described a range of ways in which feeling *knowledgeable* contributed to their confidence. This included knowing work objectives, the audience and a technical knowledge:

“I thought through sort of what I wanted to get out of it... I also knew the audience quite well... Charlie 27

I checked how politically powerful was he. Could he carry through any of the threats that he had given. What actually was the kind of the subject and what should the UK position be... I knew every angle... I'm more confident when I feel like I know the other people, kind of feel like I know how they might react to something” Charlie, 128

For some, they talked of the importance of *sharing knowledge* with others. For Kelly this was less about a functional role and more about how others' interest in their knowledge made them feel:

"so I had several colleagues who knew nothing about wine, who kind of thought it would, might have been good to know, to listen to me. So that was kind of empowering, that people were willing to listen to what I had to say, so" Kelly, 15

Being *skilled* to do the work physically, cognitively and emotionally was important:

"it's getting to learn and understand those nuances, and how they're responding like picking up on tone and pacing that's a case of OK this person wants me to hurry up, this person's happy at the pace we're going, this person probably wants to shift to another question" Chris, 66

Further contributing to feelings of competence for some participants was the act of receiving direct or indirect *affirming feedback* from others that their work will, does or has met or exceeded the required standards.

"I think it helped them erm, you know it helped them in as much as that she clearly had the faith in me to be able to do the job and she didn't feel the need to butt in and try and take over, or you know err, so yeah I'd say it it definitely helped." Jai, 112

Those who lacked confidence often felt like they lacked the *knowledge* and *skills* required as described above. Some also described receiving direct or indirect *feedback* from others that their work does not or will not meet the required standards:

"I'd just couldn't understand what it was that I was suppose to do" Jean, 640

"the message that wittingly or unwittingly she said to me was that, erm, I was wasting her time, and if I was, err, uncomfortable it was frankly because I wasn't up to the job that I was being asked to do" Peter, 70

Connectedness is the third of three components. Many participants described how they felt self-confidence when they were *engaging with others*:

"I was probably focusing totally on the group workshop participants and making sure that they were OK. So, making, you know looking and listening to them really and focusing on them to make sure they were all being included and making sure they were all feeling comfortable you know" Jade, 47

Participants such as Jude described the impact a *sense of belonging* had on their confidence:

“it felt really good that he wanted me to be there so that probably made me feel a little bit more confident and felt that I did have a voice and a say in that” Jude, 49

Support was described by some as having a long-term impact on their confidence in delivering work. Kanaka talked about the two-way *support* in their work, whereas for others one-way *support* was sufficient:

“it is much more a supporting group, where we’re exchanging ideas, we’re supporting each other, and we’re working together to be a leadership team, and formalise a strategy as well, that we’ll then kind of take back to our teams to execute” Kanaka, 49

“I feel I’m confident, I have the support that I need” Kai, 29

Many describing low connectedness talked of extreme feelings of *not being engaged* with those they work with. When asked about their physical experience Taylor talked of not having a conscious knowing and yet their description brought to me a strong sense of their isolation being in the mind, body and emotions:

“so whether they walked away or not I don’t know, I don’t think I cared then, because my isolation was total because it was silent and I don’t think I was conscious physically of what was going on” Taylor, 510

Ash used an embodied metaphor to indicate their feelings of *not belonging*, of being a misfit:

“I was like, err, a circle, a square peg in a circle hole” Ash, 324

Kelly was one of many who talked about the complexities of how *not having support* from others and self reduced their confidence and they used embodied metaphors to describe this loss:

“I mean it was really difficult for me personally because I’m like, to get people involved in something that I’ve messed up on, or, I haven’t achieved what I wanted to achieve. erm, was a huge kind of kick for me. You know, it was a huge dent in my confidence... ..I wasn’t really supporting myself in the ways I should’ve” Kelly, 61

Mindset. An *enhancing mindset* was frequently described by participants who maintained a higher baseline level of confidence, and who gained confidence from challenging moments. A *balanced perspective* was integral to Charlie's self-confidence. Even though they were referring to a mindset, they used embodied metaphors to describe both their outlook and self-confidence regarding an extremely uncomfortable meeting:

"I was like well the world didn't end, the floor didn't fall away, my [boss] didn't shout at me for that, because it wasn't, it was clearly them just being rude so I think the times where things have gone wrong have been the times when actually afterwards on reflection, have helped me become more stable in my confidence" Charlie, 162

Kai was clear that a mindset, of *growth and learning* from their difficulties has helped grow their confidence:

"I do feel that has helped my confidence level in general like just knowing that I was able to conquer that fear of being in front of a lot of people" Kai, 113

Positivity and upward spiral led to further confidence for many participants such as Frankie and Stevie:

"it's done, I, I, I, I'm happy with what's happened so far so I've got a bit more confidence going into the next step" Frankie, 122

"I think the confidence makes you relaxed, the relaxation makes you less stressed, less stressed makes comfortable, comfortable makes you confident, you are almost like in a virtuous circle then" Stevie, 305

Some shared their *sense of control* and taking responsibility as a factor in their confidence:

"we kind of needed it and missed it, so, and then I started chairing it and took responsibility for that" Ali, 39

Many with low confidence described the frustrations of having a *depreciating mindset*. This manifested as a *fixed mindset* for Jai who talked about their confidence being knocked if they did not meet their own expectations:

"why can't I get it', like 'why can't I pick it up as easily as like the new guy who sat next me' you know erm, and yeah. It's not so much, it's not so much competitive, it's just kind of like 'if they can do it, why can't I'" Jai, 217

For others it was an *unbalanced perspective*. Jean's *unbalanced perspective* was to compare themselves with others who were less competent than them to make themselves feel confident, although others may experience an *unbalanced perspective* in another form such as taking things too personally:

"this is how I was affirming myself that, 'yes', and this was how I was using that example of the other carers who would be what's the word for fucked up, they would be really screwed, in that situation" Jean, 398

"when things go wrong it, it affects me very badly, and I like, you know, I'd like, should have, used to take it personally as well" Ash, 251

Many participants described having unrealistic expectations about their work and how this can negatively impact, which has been termed a *fixed mindset*:

"kind of being a bit of a perfectionist rather than thinking this is like 80% OK, I'll wanna get close or at 100% of what, what I, what I want it to be and that kind of stunts my progress in terms of some things as well" Frankie, 202

Negativity of thought, emotion and body could manifest in many shapes and forms, such as Kim's physical experiences and Jamal's emotive experience, whilst Pat emphasises the *downward spiral* of negativity

"it's really tense, and feels really uncomfortable, like, err, drained and like queasy, hot, flushed" Kim, 37

"I always feel I haven't done enough" Jamal, 117

"I don't have the confidence to go back and the whole spirals down from there" Pat, 125

Bobbie spoke of the impact a *lack of control* had on their general state. They found it difficult to tease apart lack of confidence and *lack of control*:

"I'm a nervous person most of the time, I'm highly paranoid, highly anxious in most situations. Erm, I don't know why, it might be confidence, might be lack of control" Bobbie, 162

Confident performance: Some participants described high confidence moments as a performance which included the desire to *showcase* or impress others with their work. Joss described both the physical and cognitive experience of *showcasing* their experience at a job interview:

“You gotta walk in the door, first of all, knowing what you're talking about, confident that you, there's gonna be very very smart people in the room, that you know what you're talking about, you can deliver on what you're talking, you know you've delivered before, so you you know you want to replicate the experience, you're not reinventing the wheel” Joss

Nearly all participants such as Stevie described how when experiencing a confident performance they were *articulate*; speech was fluid and flowing. Whilst Stevie talks about being *articulate*, their main focus is the benefits for others in terms of their understanding:

“not, umming or ahing, or your speech is in a stuttered kind of searching for things in your head, but the information is flowing out of you in a uhm, in a way that- is easy for people to take on board you know, it's not rushed” Stevie, 278

At the heart of our research was the embodiment of confidence and participants described *embodying* confidence in a number of ways, and often related to their interactions with others. For Phoenix it was a specific performance of gesturing with hands, moving around the room and using movements to convey confidence in their work, for Jade confidence was embodied as a sense held within the body and mind:

“I'm probably then more expressive with my hands and things more, move around the room you know because I think that probably couples with the enthusiasm and the you know get people rallied up for something you want you have kind of show it in your movements.” Phoenix, 139

“Err, it was definitely in the chest area and probably the sort of upper belly area, yeah. And then definitely emanating into the head, so almost like a serotonin hit, I would say [laughter]. Or after a couple of pints maybe” Jade, 43

Participants such as Kim described high confidence moments as being *in-flow*, with little conscious thinking, an absence of distracting thoughts:

“when you present, you know, you're not really thinking. And you haven't got the internal dialogue. And probably it means, like, so much more authentic and creative, and engaging” Kim, 109

Others such as Kelly, highlighted how the body assists with being *in-flow*, where thinking happens but it feels second nature:

“its second-nature so you're not even thinking, well, you, you're kind of thinking, but, your body assist, assisting you because it kind of knows the process” Kelly, 53

Participants described some *self-management* techniques that included purposefully supporting and managing their self-confidence before during and after significant moments. This process is illustrated in Figure 2 through the use of an upward spiral and arrows.

Erin described being routinely well-prepared before a presentation. They put on a specific item of clothing that prepared them physically (being content with their own appearance) and yet it also prepared them emotionally and cognitively through association. They happened to be wearing the same item of clothing the day of the interview, and the interviewer sensed it held a significance for Erin's confidence:

"What's the significance or what does it mean to you?" Interviewer, 54

"Well it's really comfortable but also I know that the colour suits me and that I look good in it and it's something about you know my demeanour, so it's like putting lipstick on, occasionally I'll put lipstick on I'm not a make-up wearer, but sometimes I'll put a bit of lip on to, so there's something that says, you know actually I'm doing something that requires me to be present today to have some impact, and that's associative for me." Erin, 55

Time and again, participants talked about *self-management* during high confidence moments to maintain their confidence. Jai describes this during a pressurised situation

"I was trying to stick to the whole keep calm, keep a clear head thing so, I figured if I gave myself more time to think about it, to think about what I would do then erm, I'd be more likely to kind of do it calmly whereas if I was to suddenly say, right we're doing this, we're interviewing you, we're taking you to prosecute you erm, then the other person wasn't gonna stay calm, but also I'd probably lose my cool as well which was the only thing that was keeping me confident" Jai, 61

After a significant event, participants such as Val described how they reflected upon success, listened to (indirect) feedback and learned from what went well.

"I think it went quite well, we had a really good dialog and I think he, I was quite pleased because I think he gained some insight from this discussion" Val, 44

Loss of Confidence. When individuals talked about losing confidence, it became apparent that they were describing a process they went through. Erin's story showed how they moved through the cycle in the order described below, although others described a different order. Participants' descriptions illustrated

that they tend to move back and forth between the different phases. The amount of time in each stage was not necessarily equal. This process is illustrated in Figure 2 through the use of a downward spiral and arrows.

Experiences described by participants demonstrated that the cycle of loss usually started with a reaction to the loss of one or more components of confidence; *authenticity*, *competence* and *connectedness*. Components may be removed or damaged by the individual themselves or by other(s). We follow Erin's story which started when they perceived a *loss of competence* and *connectedness*. It happened when they started a new job, only to find out their new boss was on holiday for three weeks:

"So, I, I, I suddenly felt I didn't have the skills, I didn't have the knowledge and I didn't know who to ask to help me, particularly because my boss is on three weeks' leave and she was gonna come back in three weeks and expect me to have sorted it out." Erin, 93

They also experienced loss of *authenticity* and *connectedness* when their working environment became apparent:

"I'm an absolute classic extroverted thinker, I get my energy from other people and here I was in this room with all these people with headphones on and you know and, in any case, half of them were analysts so half of them were you know were not gonna talk to me ever, not even in the space of six months. I met people in my final week who hadn't spoken to me for six months." Erin, 145

Trauma: Participants in a state of loss experienced often first experienced what we have labelled trauma; shut down, in Erin's case, felt paralysed. Reactions participants described were invariably unpleasant or uncomfortable for them to experience. The physical reactions were many and varied across all of the participants. Commonly experienced ones included closed body language, dry mouth, feeling flushed, hot, nauseous, sweating, wanting to cry. Of the many emotional reactions given, fear was a common one, also 'fight or flight mode', anxiety, nervousness, panic and a sense of emotional shut down. The mind often reacts with impaired thinking, a fog in Erin's case, an inability to think things through and denial such as that detected in Erin's experience:

"I just I just felt tired, I felt you know completely de-energised. It was like all my energy was going into not sitting in the corner and crying" Erin, 147

“Erm, I kind of felt paralysed, it was almost like a I knew that there was all this stuff, and I'd realised what all the stuff was but it's a little bit like you know, when you've got 500 emails in your inbox, I just didn't know where to start, I felt completely at sea... I felt like my mind was just like complete fog” Erin, 107

Erin's trauma included a felt sense, a known and recurring experience of lack of confidence which was experienced but was not a thought, an emotion or physical experience. Erin had their own words to describe this felt sense even though these words might not make sense to anyone else, nor even fully describe Erin's experience.

“I mean it was just like, you know how sometimes if you want, I don't know, you probably don't know cos you're awfully fit erm, but I have a bad back, and sometimes my mind is ten paces ahead of where my feet physically are erm, and my mind and my feet you know just aren't like in the same place and I felt a little bit like that, like my, my brain and my body and everything was all just sort of disjointed and in fact it was a very strange feeling.” Erin, 111

Erin described their experience of being inarticulate as a difficulty in expressing their problematic emotions or experiences. For Erin this was a temporary experience, for others it was more enduring across the whole cycle experience:

“I was not able to articulate what it was that I thought, that was making me feel how I felt and that what I thought was the problem. I was kind of, I was kind of lost for words I suppose. Erm, and I didn't feel, I didn't feel competent at expressing where you know what I was faced with and how I was feeling about it” Erin, 167

Anger and Frustration: Anger was the next phase Erin went through. Their anger was absolute, directed toward the situation they found themselves in, and to some degree other people. Their boss had asked them to take on this job with a seemingly impossible task and on Erin's first day they discovered their boss had gone on holiday:

“Absolutely furious. I spent two-three days of just actually being furious and wanting to go around sort of smashing things up....” Erin, 151

“...I was still un-confident I just felt really really angry at being put in that position” Erin, 153

They also talked about a strong sense of *frustration*:

“The situation was completely ridiculous” Erin, 131

Self-doubt and turmoil: Self-doubt can be pervasive during loss of confidence. Participants described a myriad of ways in which they doubt themselves and are self-critical. Common self-doubts or criticisms such as those experienced by Erin were targeted at competence, intelligence, likelihood of success, chosen actions and decisions.

“you've got the two things that are going on there, you've got the sort of actually, am I competent to do any of the things that they are asking me to do? And also have I made a really stupid decision to do this, to move and do this job. So, it was kind of like a double whammy in a way. You know actually am I, am I not only in, in, incompetent workwise but am I stupid too?” Erin, 175

Being in a state of turmoil was evident in Erin's inner dialogue. Erin describes an inner dialogue that is in conflict with self, their lack of confidence and people that feed into it:

“I didn't want to give him, I didn't him to give the, I didn't want to give him the opportunity to be angry partly because erm, you know I know that that anger is focused on whatever it is that has erm, upset or unnerved me but he can't be that angry without me actually feeling inadequate” Erin, 185

Withdrawal and Shame; Many individuals, including Erin, talked of the *shame* about being themselves, the *shame* of lacking self-confidence and the behaviours associated with the loss of confidence:

“they think I can do this and I'm sitting here feeling like there's nothing that I can do, and I needed to get over that before I could have anybody cross on my behalf” Erin, 167

A desire to withdraw or actual *withdrawal* was frequently reported. Erin wanted to avoid taking action, they wanted to exit the situation or the organisation:

“I wanted to run away” Erin, 105

“I had this great long list of instructions that I didn't want to look at” Erin, 113

The Shift: Erin had experienced a loss of confidence and progressed through all of the phases before describing how a *shift* occurred to bring them out of the cycle and back to a level of confidence which is depicted by arrows in Figure 2. All participants who described *the shift* related it to one or more of the three

components being created or restored. For Erin it was *competence* or *connectedness*.

“I mean I think the the the biggest change for me was that I did two things, I managed to track down the HR business partner which was great cos then I, I mean she was actually able to say, god yeah it's a real mess isn't you know I've been working with them for ages but they don't listen to me, and so, so I found an ally you know in somebody who was able to say, actually it's not you, it's not you, this is a mess, they are incompetent you know let's fight it together... and the other thing that I did was you know I sort of tapped into some people over here so I was like OK, so I don't know how to work the system over there but I do know you know people who are experts in these various things that I can at least get some guidelines... and then I was able to find some sort of low hanging fruit and things that you know that I could do” Erin, 157

Some of the participants who experienced low baselines of confidence did not reference all of the phases in their stories of low confidence. This is depicted in Figure 2 by the ‘failure to shift’ arrows, keeping those individuals in a state of low confidence. Those with higher baselines of confidence, such as Erin, tended to experience all of the stages of loss before they shifted back into confidence, they also described each of the phases with greater clarity. This is depicted by ‘the shift’ arrow in Figure 2.

Mindset: Erin’s mindset played a role in their shift out of *loss of confidence*. They were regaining a *sense of control*, looking for *positives* on a daily basis and keeping a *balanced perspective* which for them was looking at the bigger picture:

“it had to be you know setting my own notion for success and sitting and thinking, what did I achieve today and what did I achieve today, and you know and how's this now feeding into the bigger journey” Erin, 163

Erin also was of the mindset that it was a *learning experience* for them and the wider team:

“there's something for me about having be thrown in into it quite so raw that I've been able to bring insights to the senior management of that team erm, that I would not otherwise have been able to bring” Erin, 191

Based on the embodied analysis of our interview data, a definition emerged where self-confidence can be described as **the socially contextualised interrelationship of authenticity, competence and connectedness,**

influenced by mindset and experienced in the mind, body and emotions. A confident performance is in response to all three components (authenticity, competence and connectedness) occurring, interacting and being positively influenced by an enhancing mindset. Loss of confidence is a reaction to one or more components missing and being negatively influenced by a depreciating mindset.

The dynamic nature of confidence emerging from the interviews is illustrated through the interacting role of mindset and illustrated in figure 2.

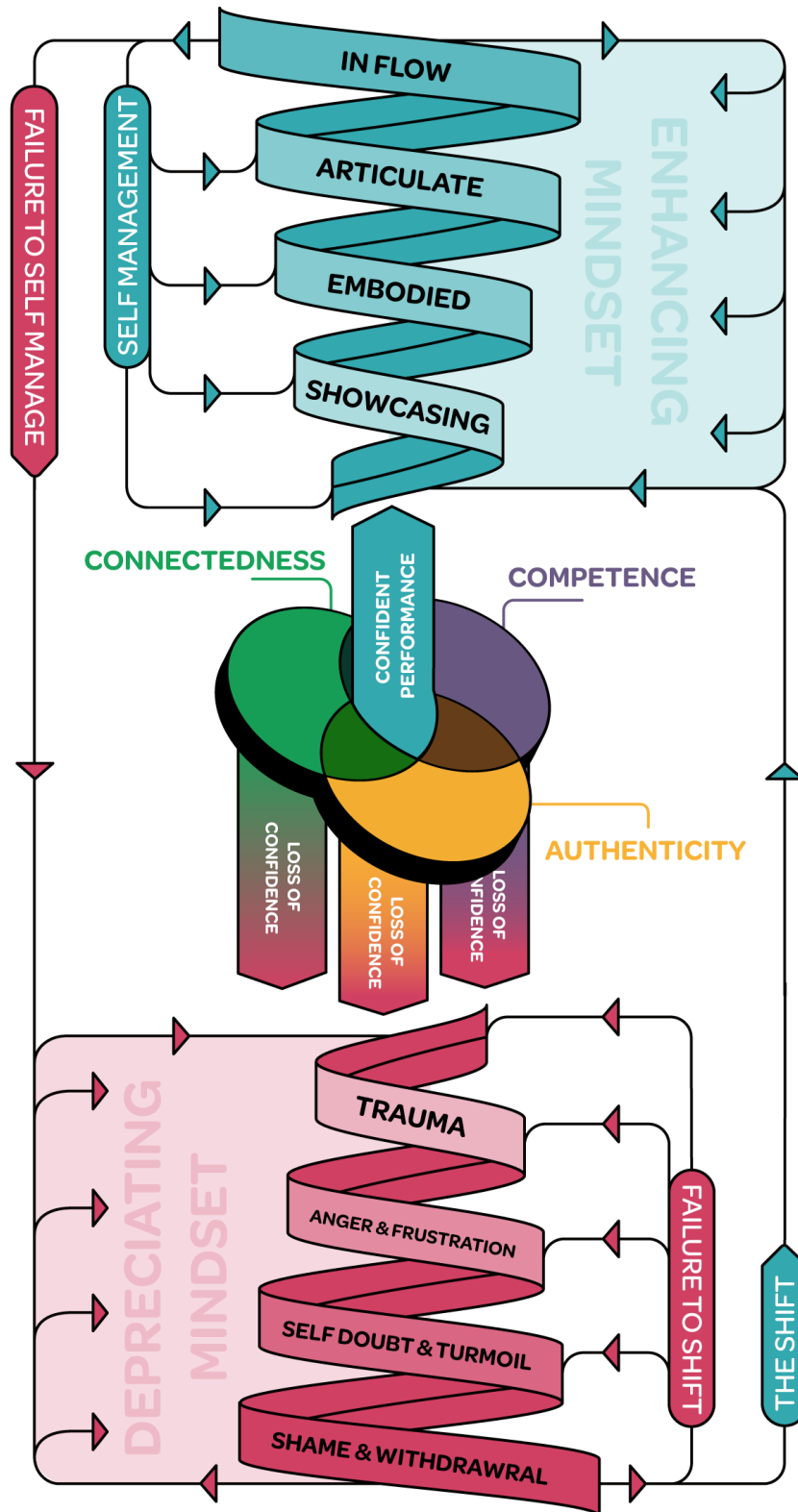


Figure 2. Proposed dynamic model of self-confidence at work

Discussion

Drawing from an embodied approach and a diverse participant sample, our findings have led to the proposition of a conceptual model that more clearly articulates self-confidence as a dynamic process. We suggest it is composed of the interactive components of *authenticity*, *connectedness* and *competence*. Unlike other models, ours also conveys what happens when an individual experiences *loss of confidence* and what is needed to develop a *confident workplace performance*, with *mindset* being situated as playing an integral role in increasing or decreasing self-confidence.

Contributions to the literature and applying our understanding to workplace interventions

Whilst remaining grounded in sound research methodology, aspects of our novel research has contributed to our understanding of self-confidence in five ways:

- i) The need for a dynamic model
- ii) Moving beyond cognitive and emotional concepts to embodiment
- iii) Reflecting workplace diversity
- iv) Identifying the role of mindset
- v) Conceptualising self-confidence as a broad factor

The need for a dynamic model arose from our criticism of existing conceptualisations of self-confidence in that they tend to be static models that are not sufficiently socially oriented. Existing models provide a baseline rating of self-confidence, which is beneficial, but our model also offers an opportunity to describe the dynamic aspect of what happens when confidence is lost or needs to be built. We highlight the experiential nature of losing or growing confidence through spirals that resonate with Fredrickson's (2004) broaden-and build theory of positive emotions. She reasons that positive emotions i) broaden an individual's attention and thinking ii) undo lingering negative emotional experiences iii) fuel psychological resilience, iv) builds personal resources over the longer term, v) trigger an upward spiral towards greater well-being and vi) seeds flourishing. In our model the positive experience of high confidence triggers an upward spiral and over the longer-term builds confidence. It would be

interesting to explore the extent to which high confidence aligns with the other features of her model.

We propose that the three components of self-confidence lie at the heart of our model, and when all three are in place and interacting, the trigger for the upward spiral occurs. *Connectedness* emerged as the most social of the three components, yet due to the dynamic nature of the model, a social thread appears to enable the three components to interact. For an individual to *be oneself (authenticity)*, it is more likely to occur when they feel a *sense of belonging (connectedness)*. *Feedback (competence)*, which tends to come from interaction with colleagues provides opportunity one to *know oneself (authenticity)*. The components can also be considered to interact with *mindset; support (connectedness)* can help individuals retain a *balanced perspective (mindset)*.

Our model suggests that a confident performance requires social factors such as being *articulate* and *showcasing* one's work. Loss of confidence also appears to contain social factors such as *shame and withdrawal* which could not exist without a wider social workplace. We conclude that our model is both dynamic and social in nature, which is more reflective of the true determinants of self-confidence in the workplace. The dynamic and interactive nature of self-confidence brings implications for workplaces who wish to have a more confident workforce. We suggest workplaces train managers and team members in the art of giving and receiving feedback, whilst supporting colleagues. Diversity training could also benefit in enabling leaders and managers to create an inclusive environment where a range of individuals feel secure being themselves and have a sense of belonging.

We moved beyond cognitive and emotional concepts to embodiment in an effort to address a lack of attention to the body in existing conceptualisations of self-confidence. Typically, self-efficacy and self-esteem theories focus on cognitive and emotional experiences yet through our methodology, in particular our embodied interview, we encouraged participants to attend to their bodily experiences. Arguably, this supported a better understanding of cognitive and emotional experiences too as an emerging viewpoint is that they are rooted in

the body's interactions with the world (Anderson, 2003; Niedenthal and Maringer, 2009; Wilson, 2002). Features of our model reflect that embodiment has an important role to play in self-confidence, such as an *embodied confident performance*, and the strong physical experiences reported during *loss of confidence*, in particular the *trauma* phase of loss.

It is interesting to note that we did not frame the ideas of loss or growth of confidence to the participants in our interview questions, we simply asked for an example of when they were high in confidence, and one of low confidence. We believe that without exploring interpersonal and physical experiences, the model would not be as dynamic, the lived experiences of losing and building confidence often came from questions about physicality and the role others played. There are considerations for applying the model, for those seeking to develop confidence, a more embodied and interpersonal approach to learning and development is arguably more appropriate. If self-confidence is experienced as an embodied interaction with the world, then we suggest it should be developed as such.

We reflected workplace diversity in our methodology by ensuring a wide range of workplace perspectives were sought out. As such, we believe that our research has contributed to the literature by enriching and broadening our understanding of what self-confidence is.

In the existing self-esteem literature, we saw the difficulties in measuring it. The literature tends to show that even from a young age, females rate themselves lower than males when it comes to terms such as “really, really smart”— which authors suggest this is a childhood version of adult brilliance (Bian, Leslie, and Cimpian, 2017), and yet the argument implies that the male dominated self-evaluation of ‘brilliance’ is desirable without question. It is however, plausible that women value and rate themselves using a different characteristic, with lower concern for brilliance. Overholser (1993) who took an idiographic approach to measuring self-esteem, found that males tended to emphasize task success more than women, who placed more emphasis on social relationships and personal qualities. Is it possible that as well as self-esteem being fragile/secure, personal/collective, state/trait, specific/global, there is also a ‘feminine’, ‘masculine’ and ‘other’ dimension of self-esteem? Thereby adding

weight to the argument that self-esteem is difficult to measure, suggesting the conceptualisation of self-esteem is not broad enough. As our conceptualisation is based on a broad range of participants we argue it is unlikely to suffer from excluding parts of the population such as women, yet we recommend quantitative work to explore this.

We argue that by adopting our model of self-confidence, a diverse range of individuals will be supported to develop their self-confidence in the workplace, giving organisations access to a wider pipeline of talent and leaders. Those low in self-confidence are less likely to pursue challenging careers and may even leave the organisation (Lent, Brown and Hackett, 1994; McNatt and Judge, 2008). It is feasible that by using models of self-confidence that are not relevant, such as women striving to view themselves as 'brilliant', self-confidence is unlikely to improve, or may even dip further because the model being strived toward is not sufficiently meaningful to the individual.

The role of mindset in determining one's self-confidence was reached in our research by exploring self-confidence as a dynamic construct. Dweck (6: 2017) who labels mindset as either fixed or growth describes the former as "believing that your qualities are carved in stone – the fixed mindset creates an urgency to prove yourself over and over". Growth mindset on the other hand, is "based on the belief that your basic qualities are things you can cultivate through your efforts.... Everyone can change and grow through application and experience" (Dweck, 6: 2017). Our model suggests growth of confidence requires a mindset of growth and learning. Dweck's fixed mindset does not quite convey loss in its terminology yet in her writings she conveys that even exceptionally talented individuals can lose their edge when besieged by a fixed mindset. As far as we are aware, mindset does not feature heavily in any of the existing conceptualisations of self-efficacy or self-esteem. Yet we argue it plays a crucial role in the dynamics of building and maintaining a confident performance at work, and the inevitable situation of losing confidence. When loss is experienced, an enhancing mindset will most likely help them move through the loss quickly and provide learning opportunities that bring the individual back to a higher baseline than before. For example, research shows that 'benefit finding' in response to trauma, such as reporting a change in one's life perspective can

help to mitigate feelings of helplessness, and preserve one's value, worth and purpose (Janoff, Bulman and Frantz, 1997).

A broad factor has merits over specific factors in psychology. Specific factors that have been split by psychologists to make fine distinctions give little consideration to their possible core, whereas broad factors have potential to explain the overlap in measures. For example, Judge, Erez, Bono and Thoresen (2002) found a single factor to explain the strong relationship between self-esteem, neuroticism, locus of control and generalised self-efficacy. We propose our model of self-confidence is a broad factor.

In the literature, the term self-confidence is widely used, yet ill-defined and frequently confused with self-efficacy and self-esteem. The thematic review of 15 self-confidence measures conducted by Kane et al (2018, under review) found self-efficacy and self-esteem to be distinct constructs with five themes arising from the scales. We compare these themes with our model, see Table 2 below. These findings suggest our model is broad enough to align with all five of the themes that emerged from existing measures of self-esteem and self-efficacy, and supports Kane et al's (2018) conclusion that the construct of self-confidence is broader than either self-efficacy or self-esteem. We also note that *loss of confidence* and *mindset* do not feature on the table which serves to highlight that existing models do not capture these factors.

Conceptual review	Existing self-confidence concepts		Our model
Relationship with self	Self esteem		Authenticity
Competence	Self esteem	Self-efficacy	Competence
Seeking and Offering Help		Self-efficacy	Connectedness
Social/communication		Self-efficacy	Connectedness
Appearance	Self esteem		Performance

Table 2. Comparison of Kane et al's (2018) conceptual review, existing self-confidence concepts and our model.

Reflections, relationships and support from the literature

While our model aligned directly with some of the literature highlighted in our introduction, such as knowledge sharing being a feature of high self-confidence, we went on to identify:

- i) reflections from the literature with a unique twist
- ii) relationships in the literature
- iii) support from the literature

We saw *reflections from the literature*, yet our findings appeared to have a *unique twist*. Downward comparisons were described by some participants as an approach to elicit feelings of high confidence. However, we also saw in the wider stories that despite the momentary bolstering of confidence, the approach actually tended to serve to maintain lower baseline levels of confidence.

During our research we were interested in what happens during moments of low confidence. Interestingly, five stages of confidence loss emerged from participant descriptions that resonated with the five stages of loss when grieving (Kübler-Ross and Kessler, 2005). They also contained similar features such as each person finding their way through the stages in an individual way. The five stages of loss was a surprise finding to the authors. The first time a participant spoke of their anger the researcher momentarily doubted the participant and the process, unable to see the relevance of anger to self-confidence, yet it emerged clearly in analysis stage. As our dynamic conceptual model explains and establishes principles of how self-confidence is both lost and developed, we believe it generates many research opportunities in further exploring and understanding both processes.

We spoke of a *relationship in the literature* between self-confidence and bullying. This theme emerged strongly in the interviews. Whilst it does not feature in the model, nearly all participants told stories of bullying, harassment or discrimination which knocked their confidence. Some stories reached levels of systematic and intentional bullying that were harrowing for the individual. For some these stories were what motivated them to take part in the research, to have their story heard. As researchers, we were moved by their courage and honesty, and the prevalence of bullying, harassment and discrimination shifted more firmly into an area of interest for us.

In an effort to validate our model, we found *support from the literature*. A positive link between authenticity and self-esteem has been established (Goldman and Kernis, 2002; Heppner and Kernis, 2007) and Campbell (1990) demonstrates a link between knowing oneself and high self-esteem.

Social Cognitive Theory, which informs the well-established and validated self-efficacy theory, shows support for our *competence* component. Knowledge structures represent rules for complex and proficient behaviour and skilled action. Skill development comes from practice and once proficient, sensorimotor systems regulate execution (Bandura, 1997). Further support comes from Tarafodi and Swann (2001) who place self-competence at the heart of their self-esteem model. Also relevant was further research supporting the link between those confident in their ability and the sharing of useful knowledge (Cabrera, Collins, and Salgado, 2006). As might be expected, those experiencing fear of negative evaluations are less likely to share knowledge (Bordia, Irmer, and Abusah, 2006). Finally, in support of our *competence* component, the literature shows a link between positive feedback and high self-confidence (McCarty, 1986; Schunk, 1991).

Lee and Robins (1998) identified a positive relationship between social connectedness, in particular a sense of belonging and high self-esteem. Whilst the research is limited in that it was conducted primarily with women, in a non-work context, it goes some way to supporting our model, in particular the *connectedness* component. Other researchers Heppner, Kernis, Nezlek, Foster, Lakey and Goldman (2008) found feelings of competence, social connectedness and authenticity were related to self-esteem. Our model also maps onto Deci and Ryan's (1985, 1995) theory that self-esteem is associated with competence, relatedness and autonomy (which maps on to our *authenticity*).

We conclude that whilst our emerging model of self-confidence is unique, it is well supported by the existing literature as a valid conceptualisation of self-confidence.

Limitations and future research

Our self-confidence model arose from qualitative research, to enable satisfactory understanding, measurement and subsequent development of self-confidence in the workplace. We sought to identify a broader model, yet identify the risk that the conceptualisation can be too broad and factors might not relate to a higher order core construct, it is possible that we have found a cluster of constructs that only have minimal relation. As such we have identified a number of further research areas that in conjunction could address this concern and highlight limitations within our own approach.

In developing our model, we sought to overcome three main limitations. Firstly, self-confidence is not static, and it operates in a social context. We believe quantitative empirical validation of the model could be beneficial. In particular, the dynamic nature of our model lends itself to both state and trait. Research on the *loss of confidence* and *confident performance* as states of self-confidence, and the core components and mindset as trait self-confidence could provide support in establishing our proposal.

Gaining further insight to the role mindset has to play as part of self-confidence, exploring from the perspective of Dweck's model and looking for evidence to support our theory that an enhanced mindset plays the role we suggest it does. Qualitative interviews over a longer period of time, as well as diary studies would provide detailed insight into how and when mindset influences state and trait confidence and the shifts people make between loss of confidence and a confident performance.

Research to understand if there is a relationship between self-confidence and workplace bullying could further explore the social context of self-confidence. We see two lines of enquiry as being pertinent and potentially significant in reducing bullying. Further research on the link between leadership self-confidence and bullying trends is called for. Secondly, understanding if there is a link between individual self-confidence levels and experiencing bullying as a victim is also viewed as important. Both research lines could be conducted using self and 360 report but would require significant ethical consideration. The

likelihood of workplace bullies being 'discovered' would lead to the question of what interventions would be required subsequently.

The second limitation we identified was that physiological factors have been largely overlooked in measuring self-confidence. We encourage other researchers to pursue more contemporary research approaches as demonstrated in our method. We echo other researchers' calls for greater attention to the body in leadership and organisational research (Boyatzis, Smith and Blaize, 2006; Wright and Diamond, 2006; Heaphy and Dutton, 2008) and extend embodied research to any work pertaining to the concept of self. We engaged a diverse sample to reflect a broad range of experiences and address our third criticism of existing measures. During our analysis we did not observe differences between groups, yet believe quantitative analysis to establish any differences in minority workgroups could provide interesting insights. Should there be difference, interventions could be adjusted accordingly.

Qualitative exploration of whether the model is effective as the basis of self-confidence intervention such as group coaching, especially with minority and under-represented groups in the workplace could provide organisations with rationale for rolling out developmental programmes. We suggest a range of data could be gathered pre and post intervention such as observations, self-report including psychometrics, diaries, and interviews, 360 reports, exit interview content, appraisal data and promotion successes.

Whilst our research focused on diversity and inclusion we acknowledge that neither interviewers were male, BAME, had disabilities and they reported as neurotypical. It is likely these identities have influenced and potentially limited our research findings, and researchers with other identities may have had a different insight from the interviews and subsequent analysis. As such we have sought to share our research as openly as possible to provide readers with the opportunity to make their own interpretations.

Without intention, and despite efforts to sample broadly, no participants from lower socio-economic status came forward for interview, and our sample of

black and ethnic minority participants was smaller than desired, despite best efforts to reach out to a wide background of participants. We acknowledge these restrictions within our sample may render our model less meaningful to those workplace groups, as such this is also a recommended area for further research. We believe the research was significantly enriched by expanding gender categories beyond the traditional binary norms; as such we encourage researchers to engage non-binary and transgender individuals in research as a matter of course.

Conclusion

Through incorporating experiences of self-confidence from a diverse population and giving due consideration to embodiment in our methodology, our study suggests that self-confidence is a broad, dynamic and social construct. We encourage future research to consider context, embodiment and diversity in their consideration of self-confidence and the implications of its presence or absence for people in the workplace. In practice, this dynamic, emerging model offers implications for individuals, teams and organisations including offering self-confidence training, diversity training, giving and receiving feedback training.

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